

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

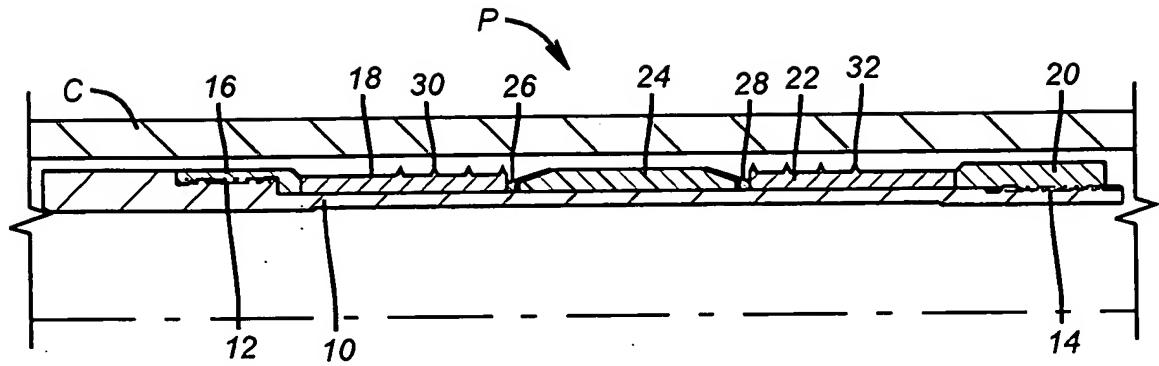
Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

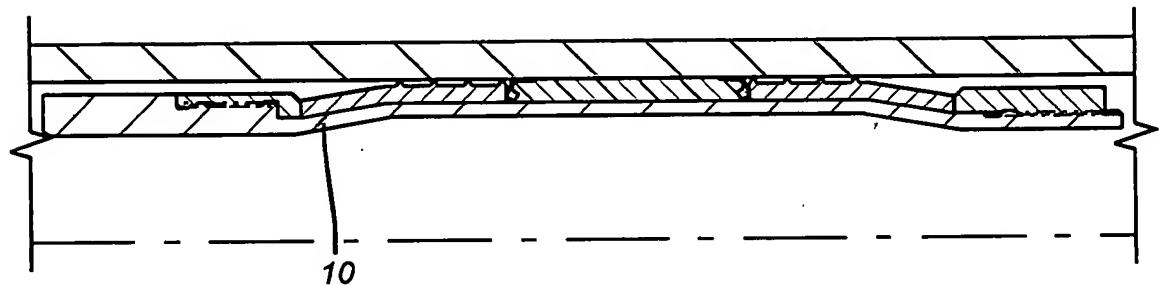
- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

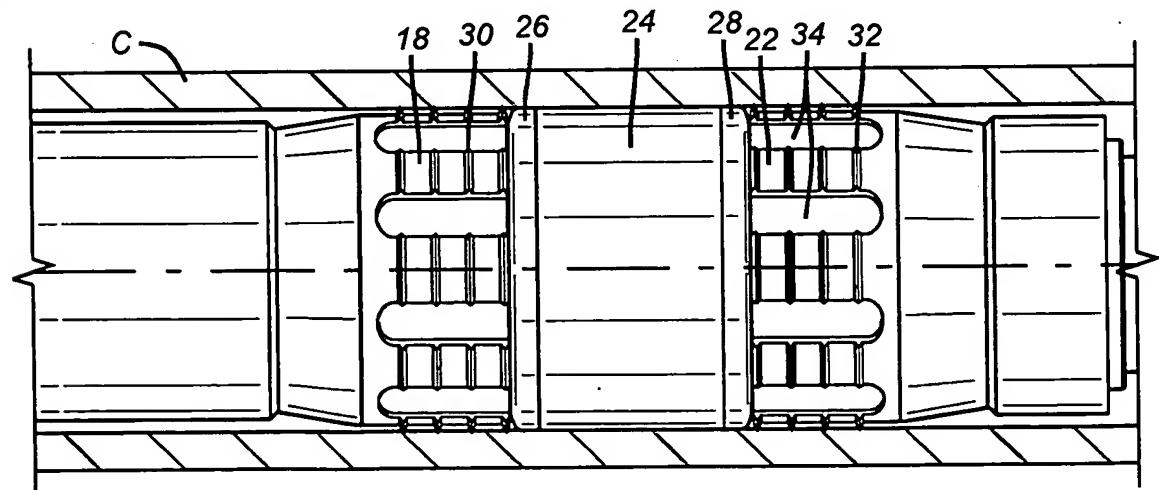
**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**



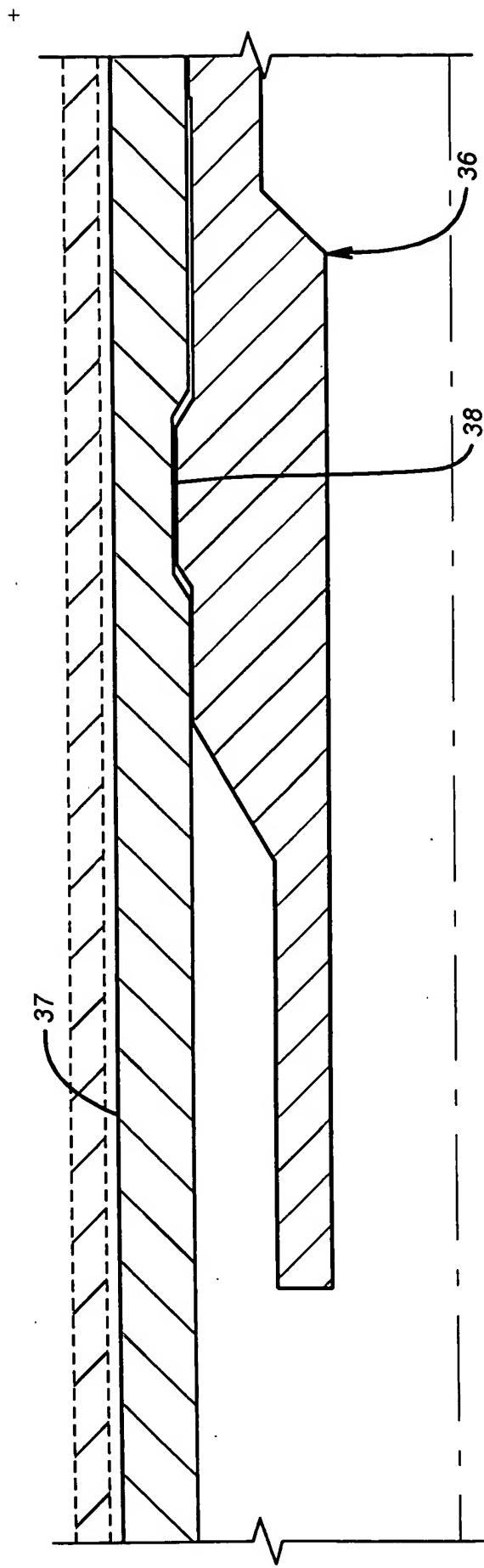
**FIG. 1**



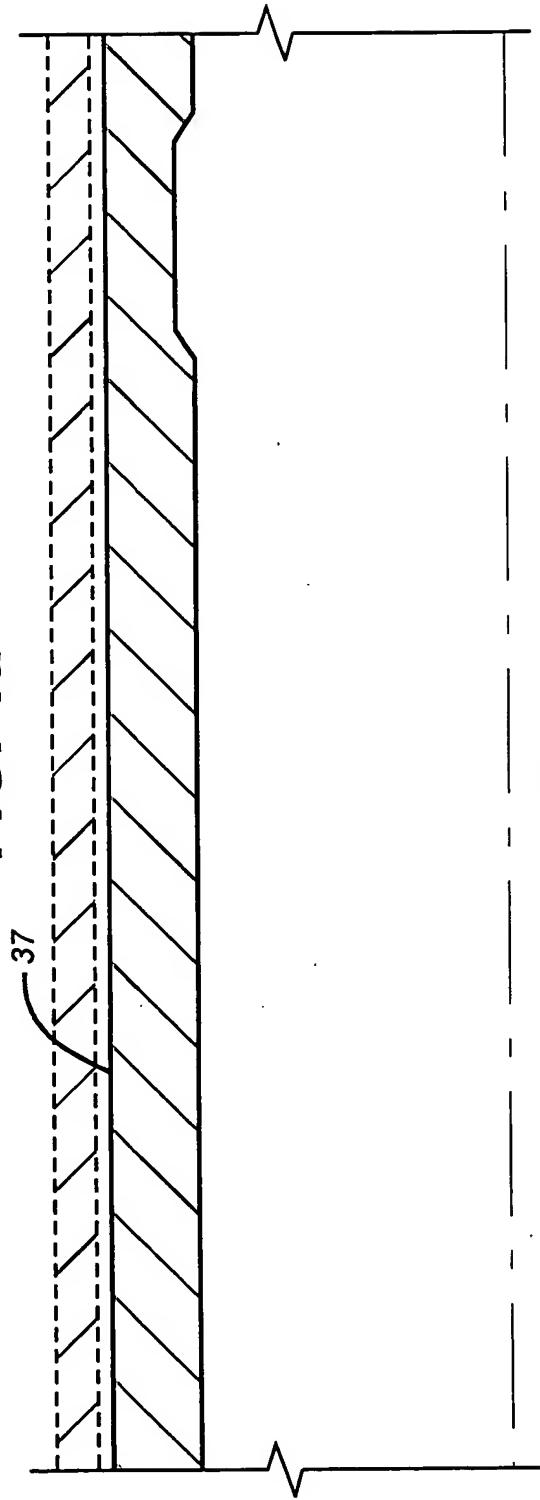
**FIG. 2**



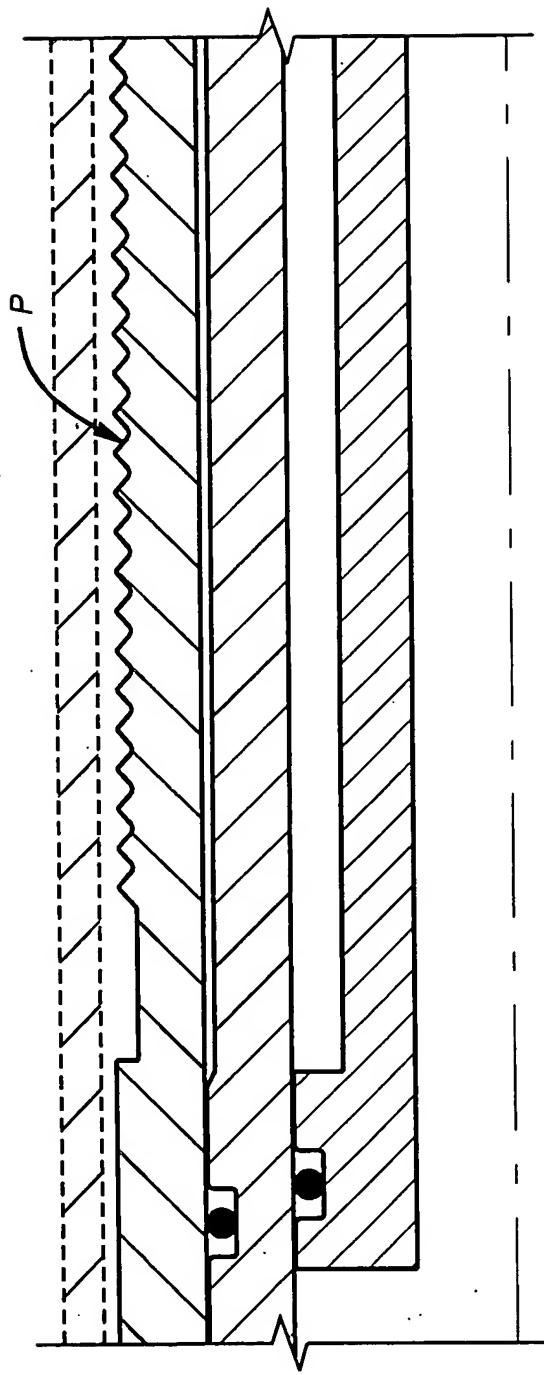
**FIG. 3**



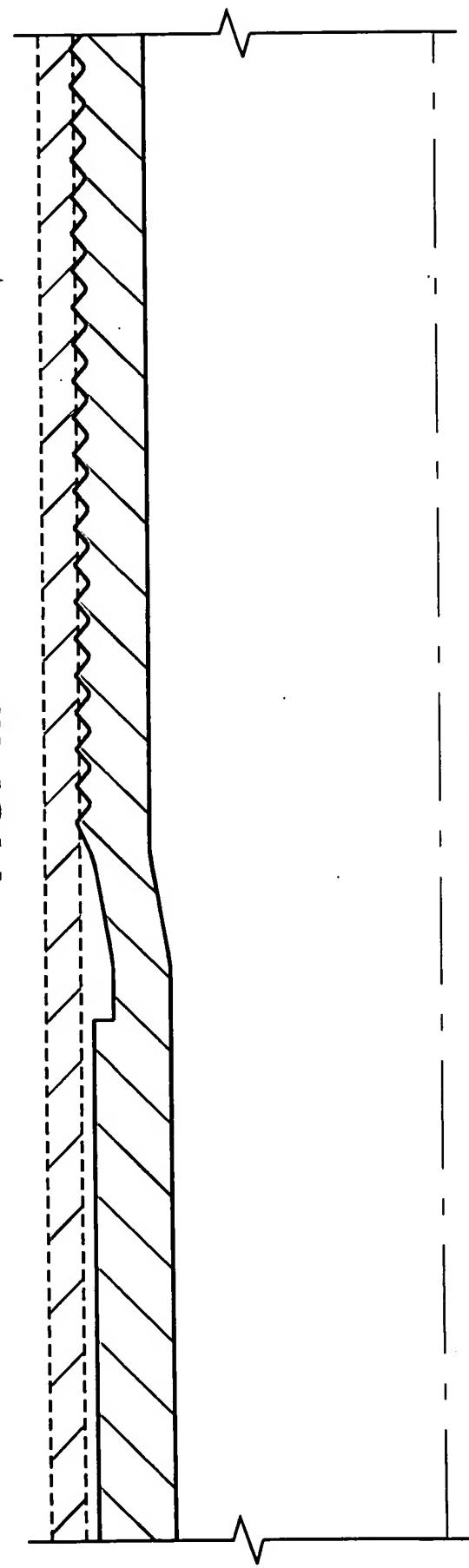
**FIG. 4a**



**FIG. 5a**



**FIG. 4b**



**FIG. 5b**

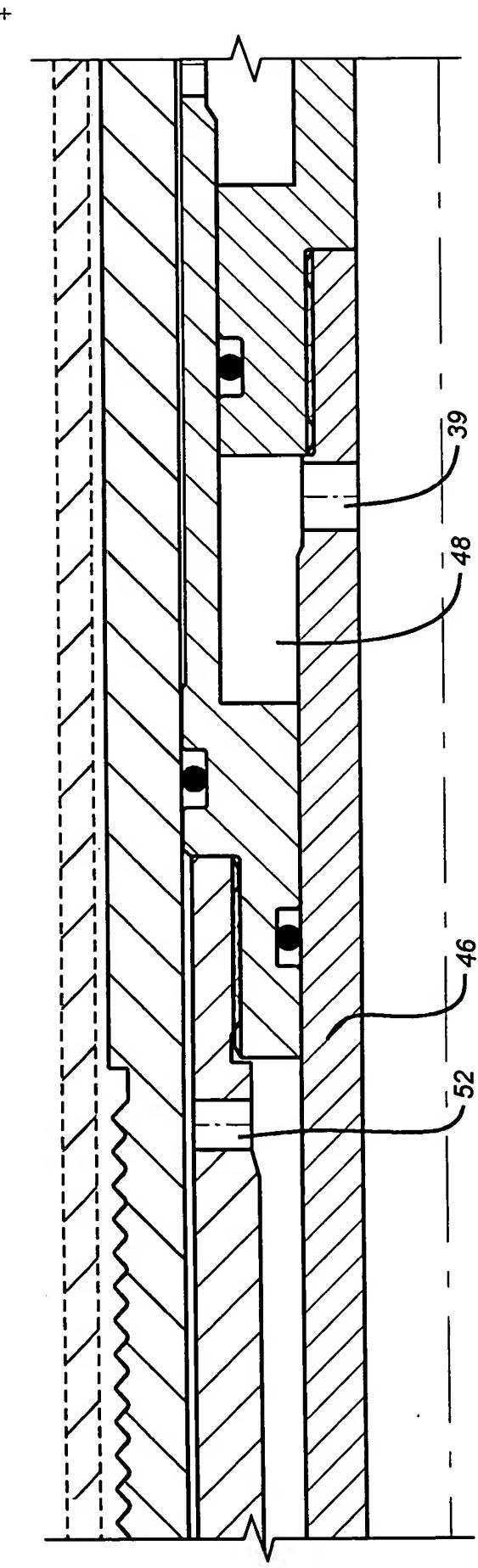


FIG. 4c

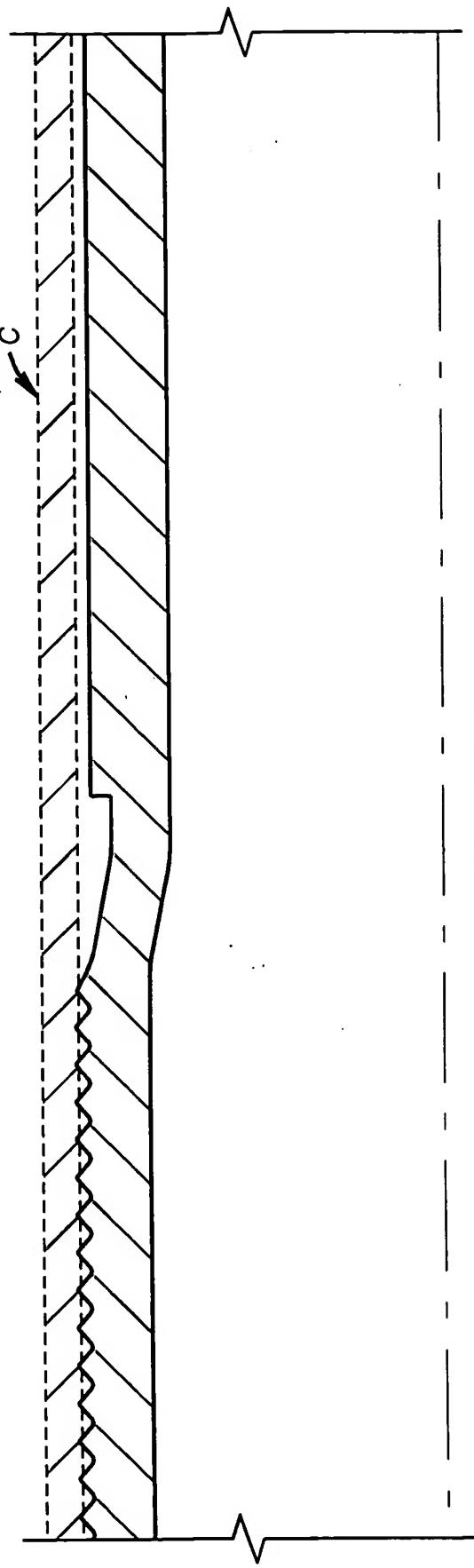
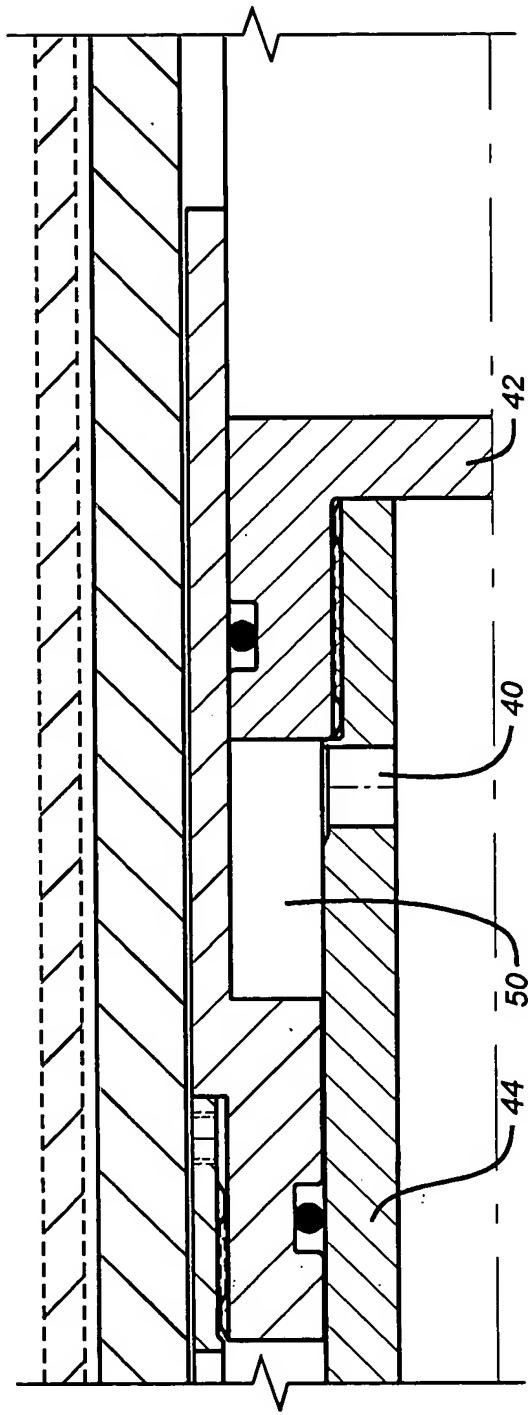
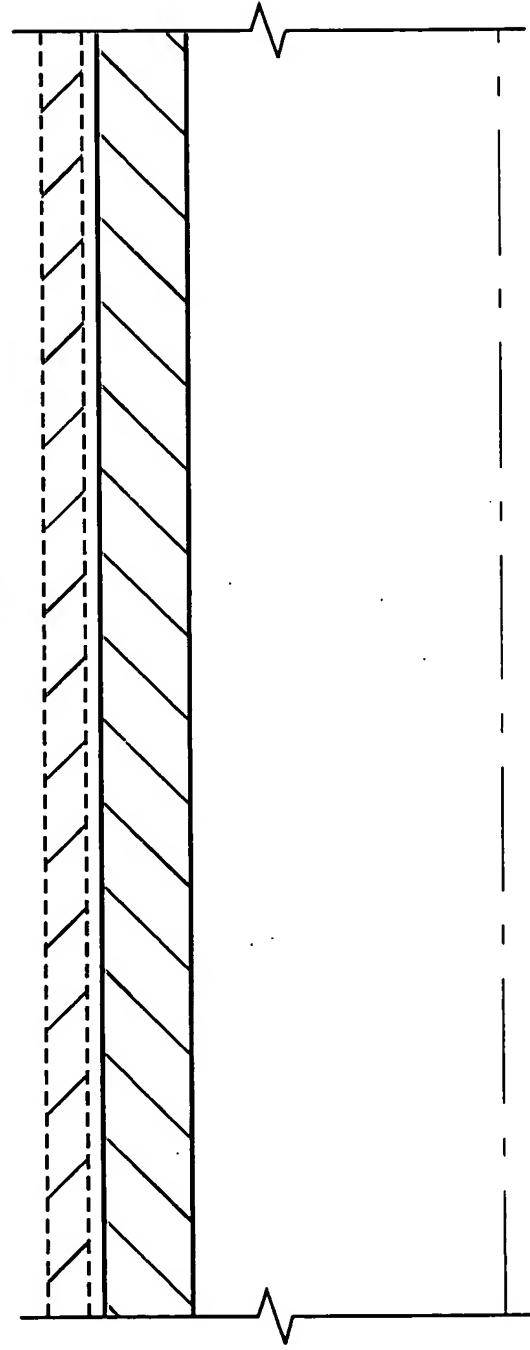


FIG. 5c



**FIG. 4d**



**FIG. 5d**

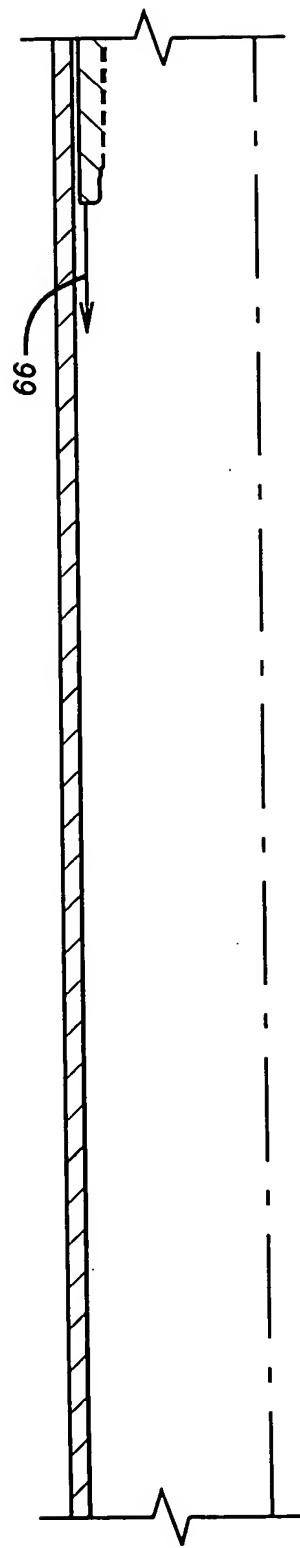


FIG. 6a

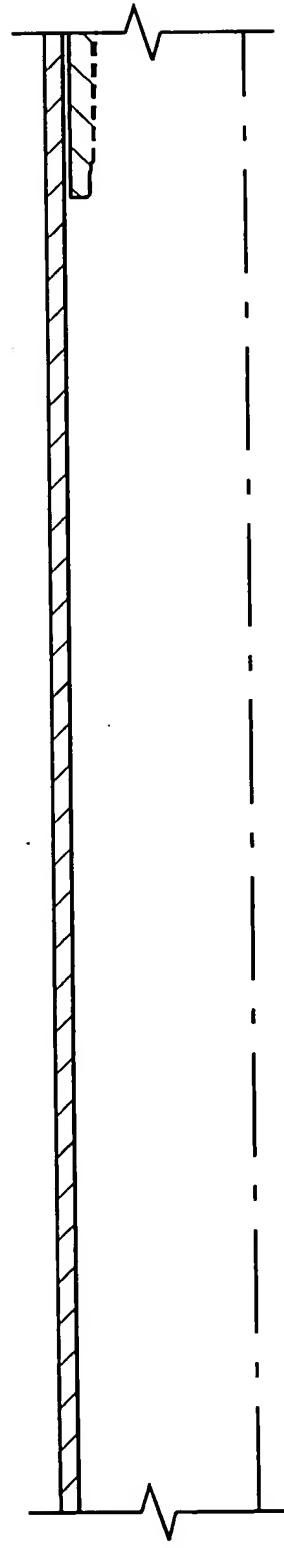
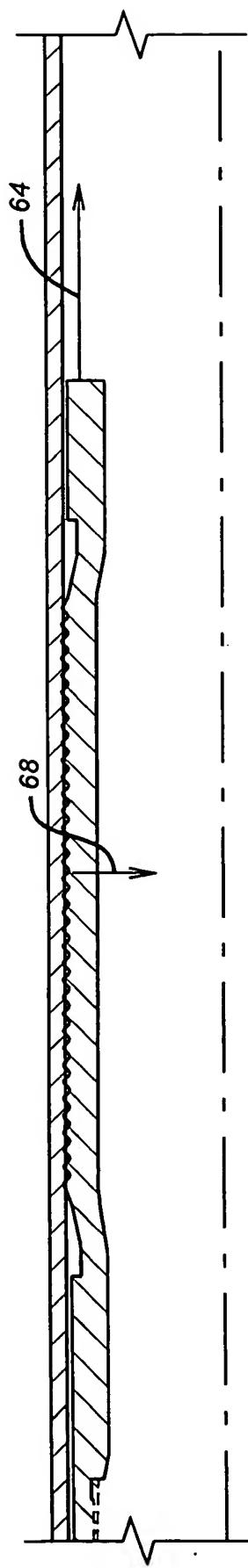
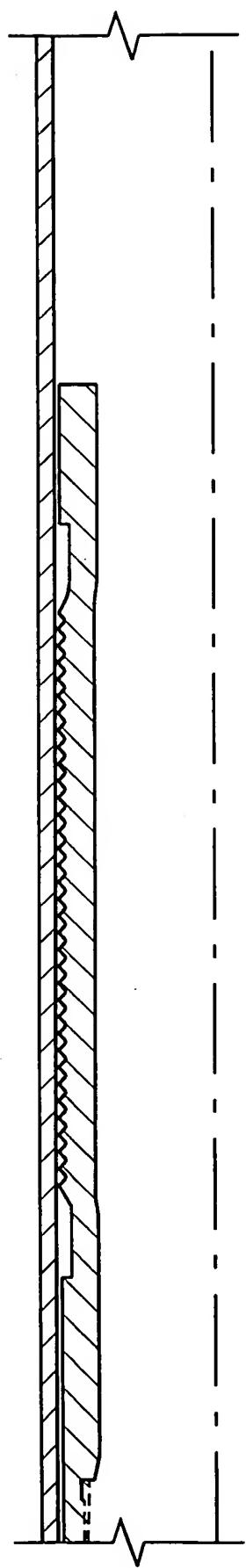


FIG. 7a

+



*FIG. 6b*



*FIG. 7b*

+

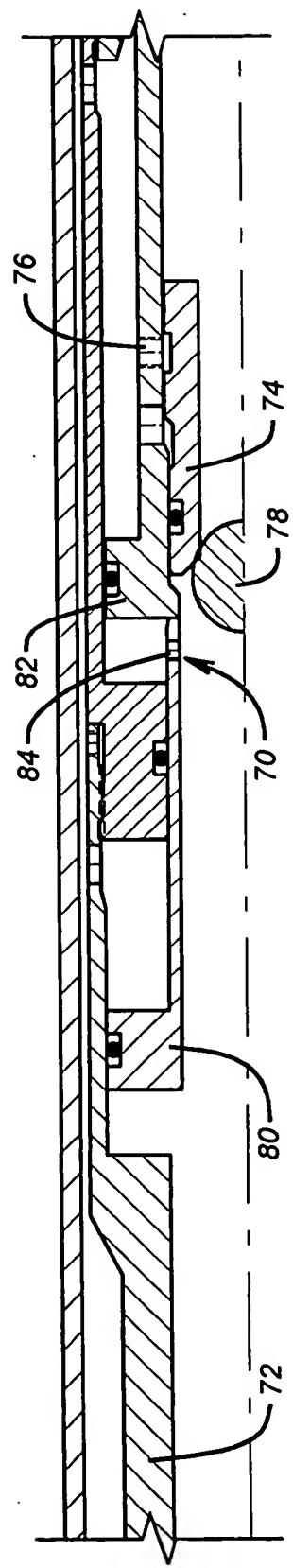


FIG. 8a

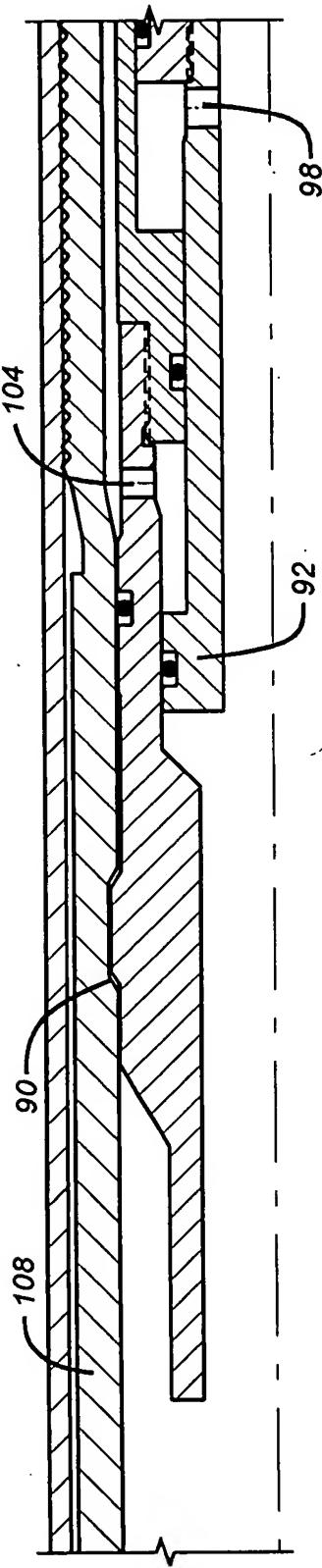
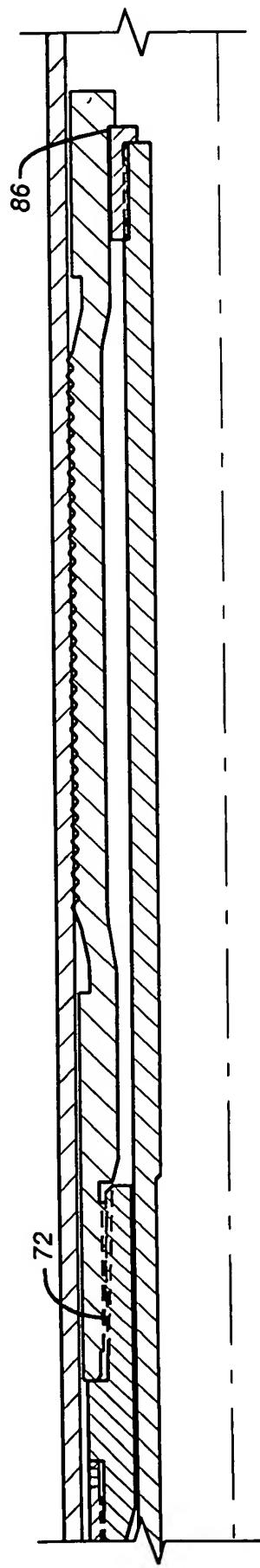
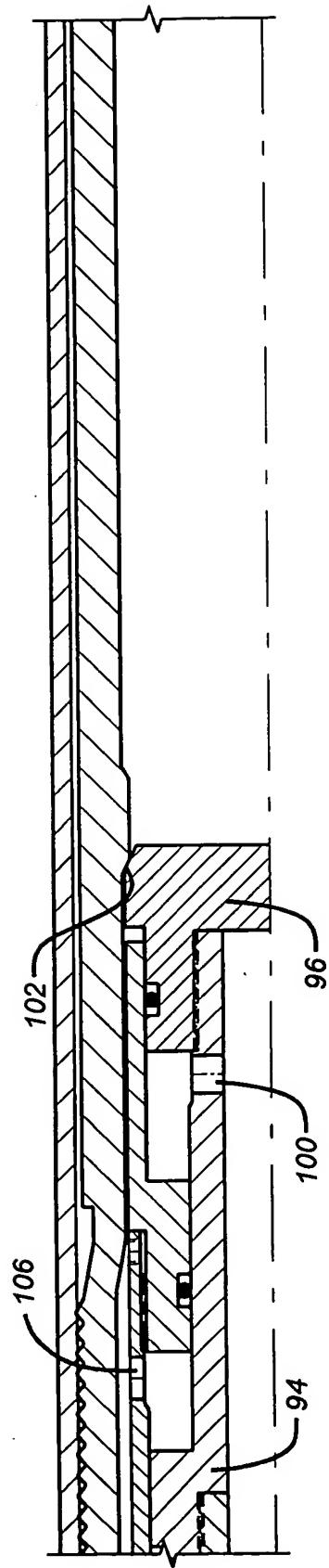


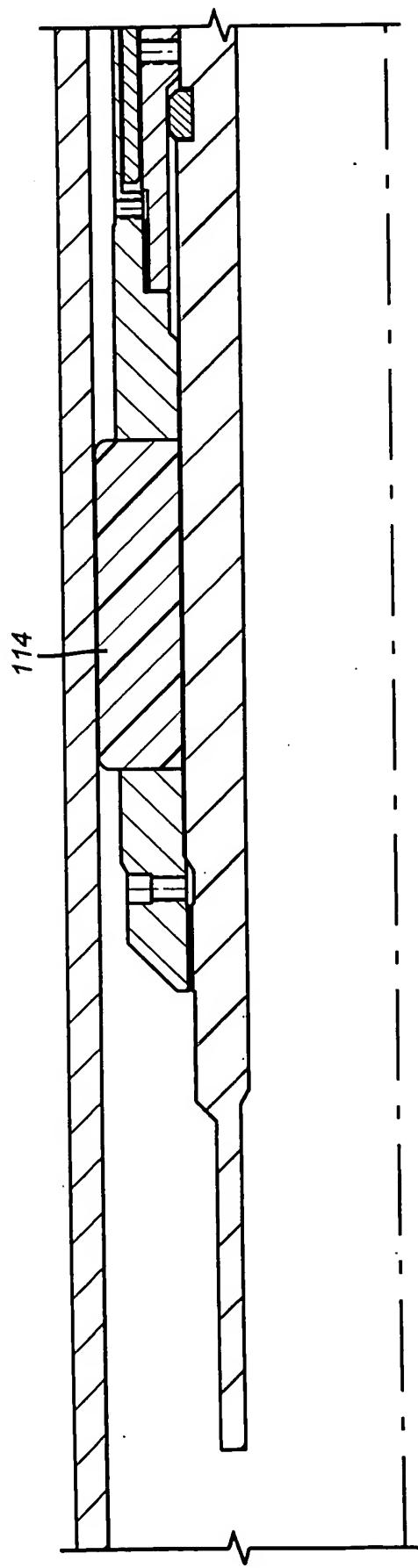
FIG. 9a

*FIG. 8b*

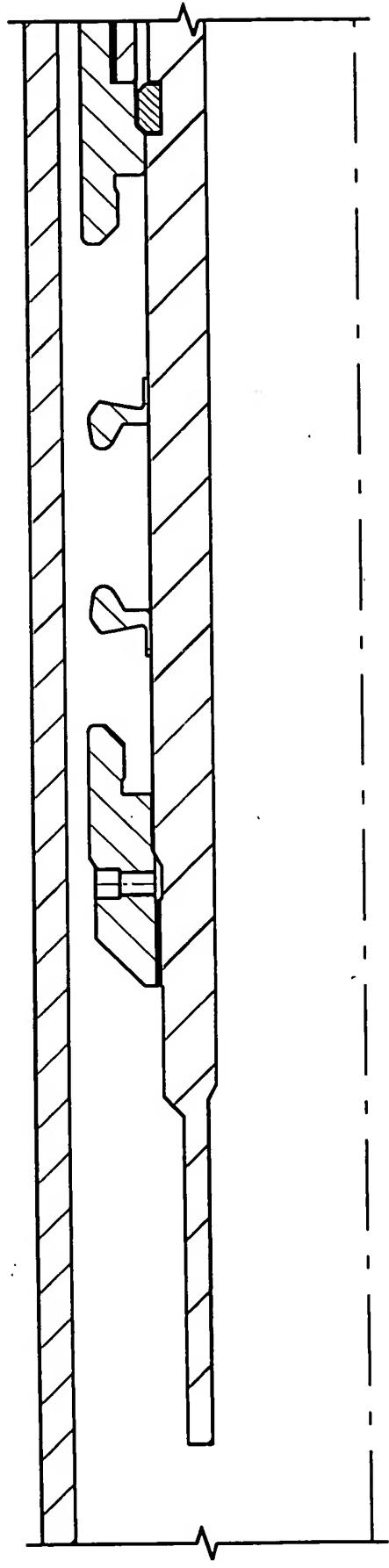


*FIG. 9b*





*FIG. 10a*



*FIG. 11a*

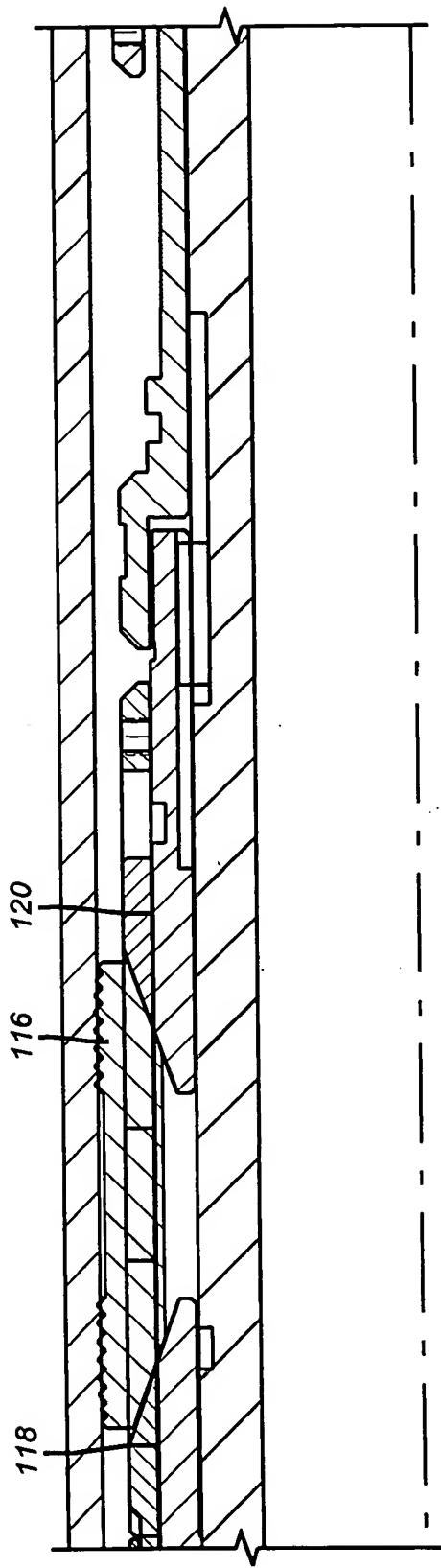


FIG. 10b

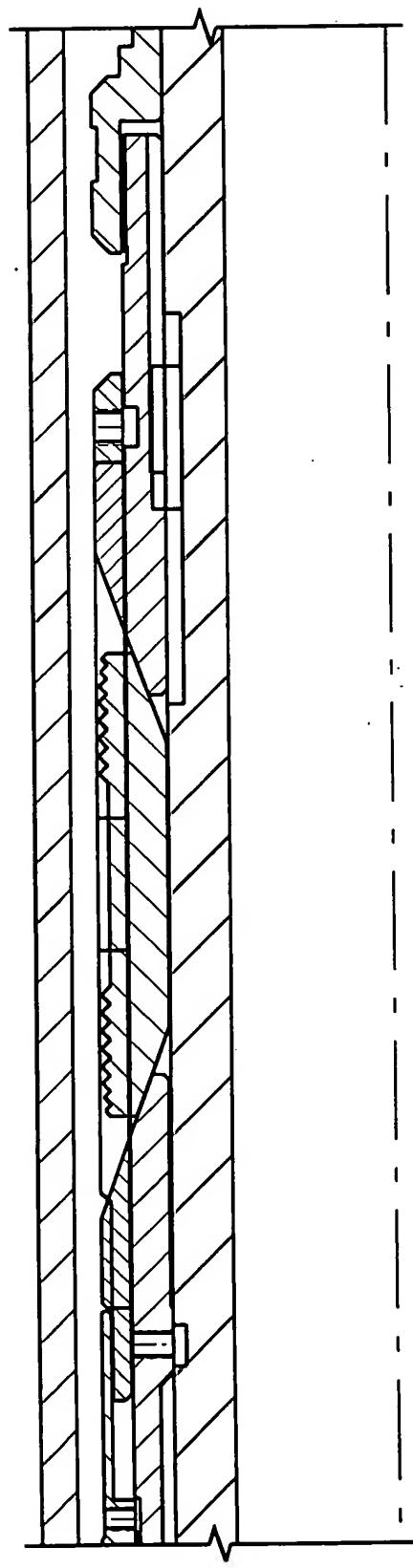
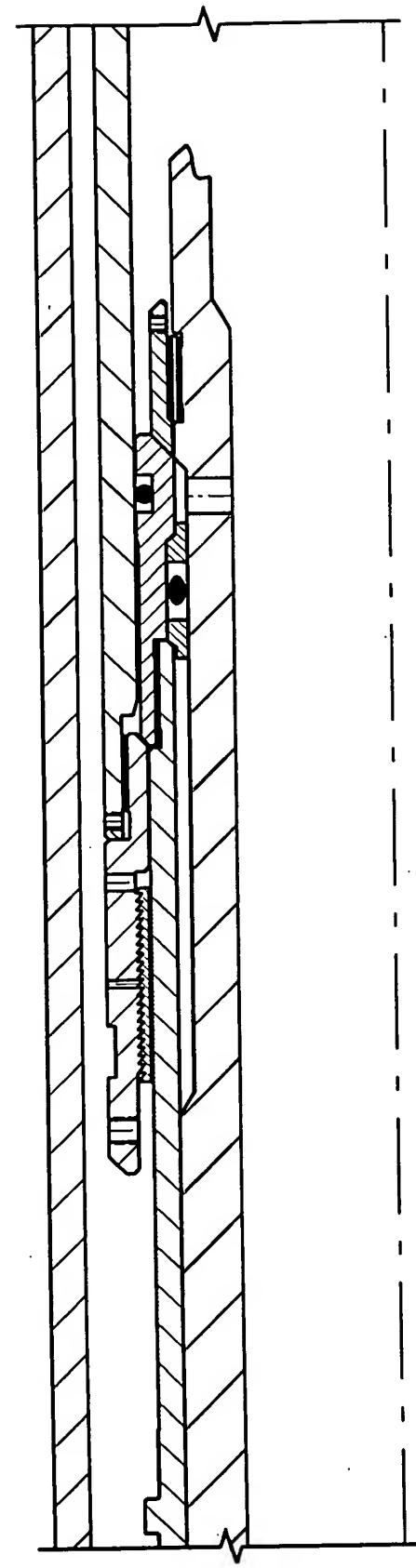
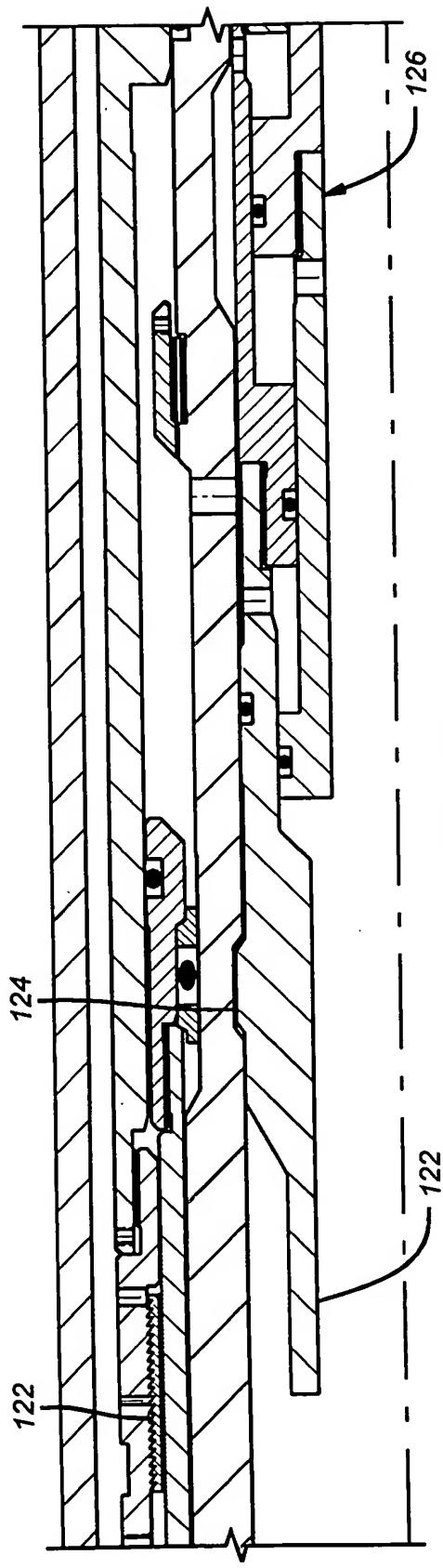


FIG. 11b



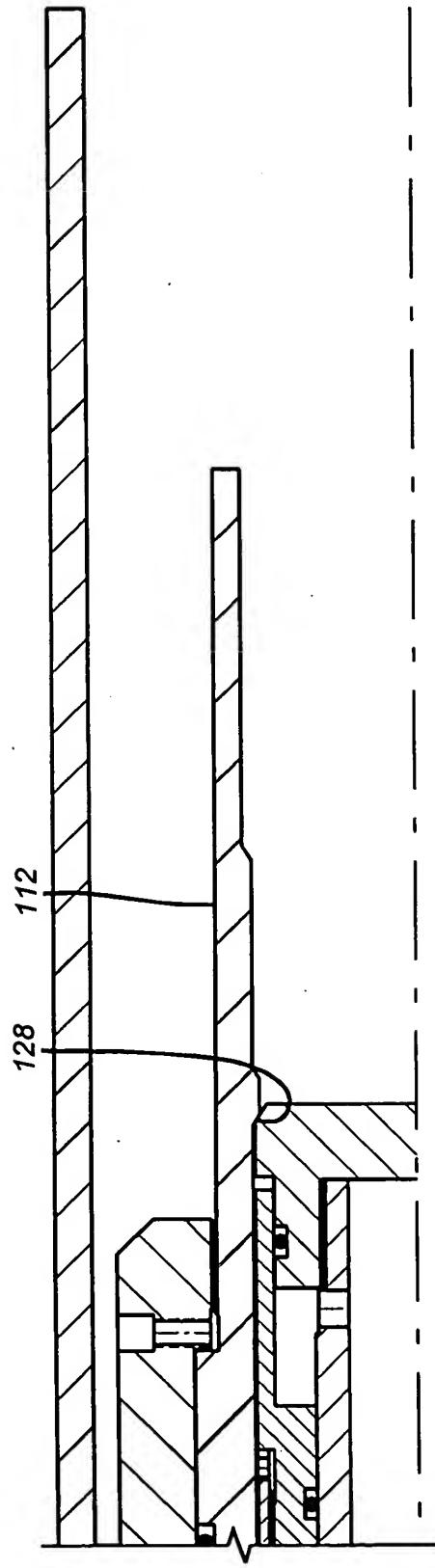


FIG. 10d

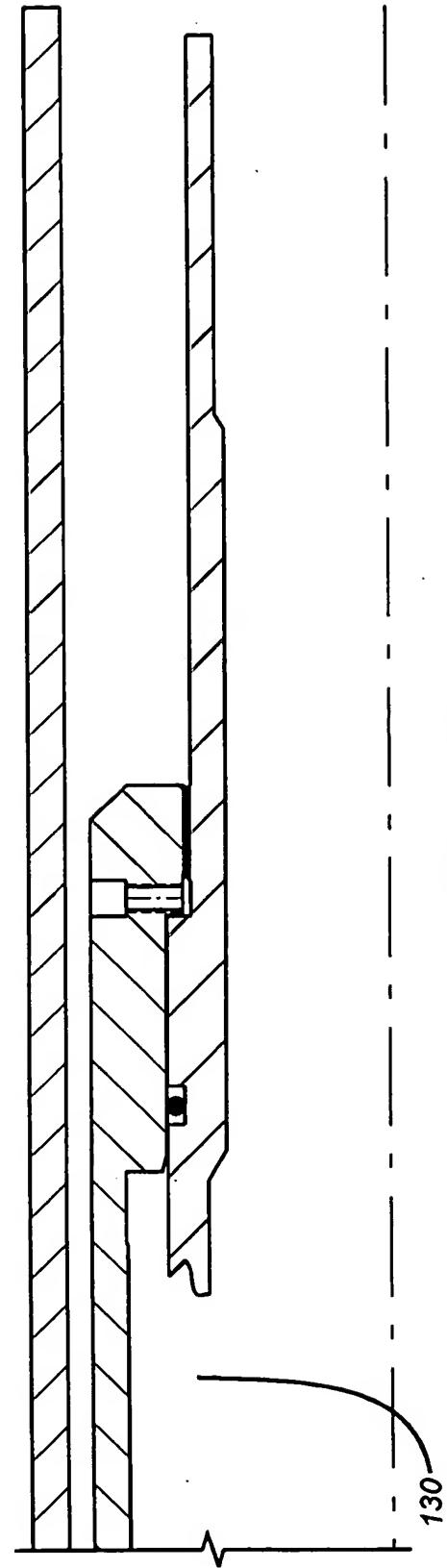


FIG. 11d

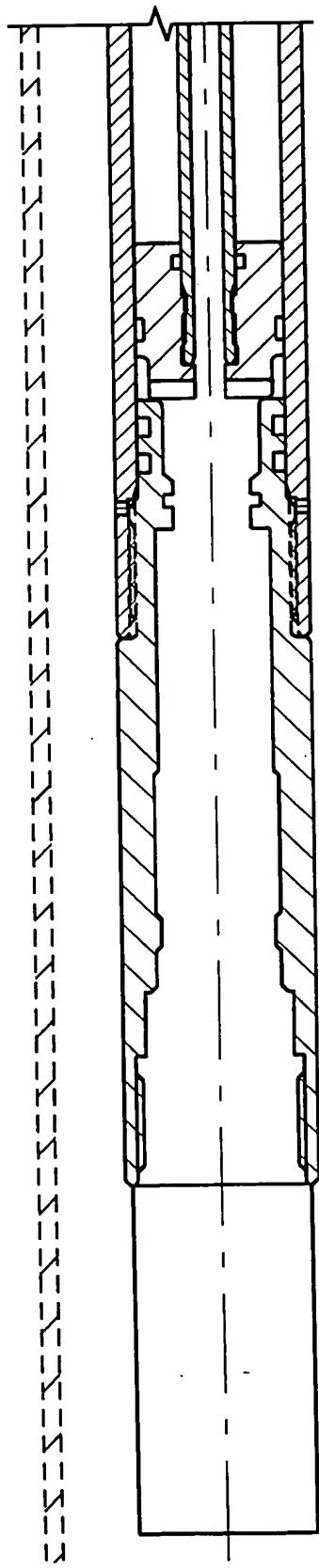


FIG. 12a

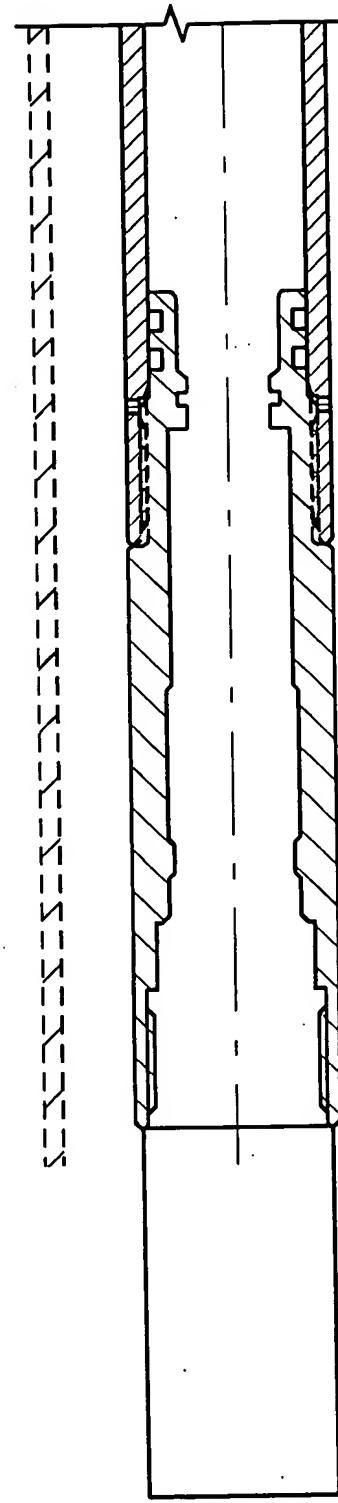
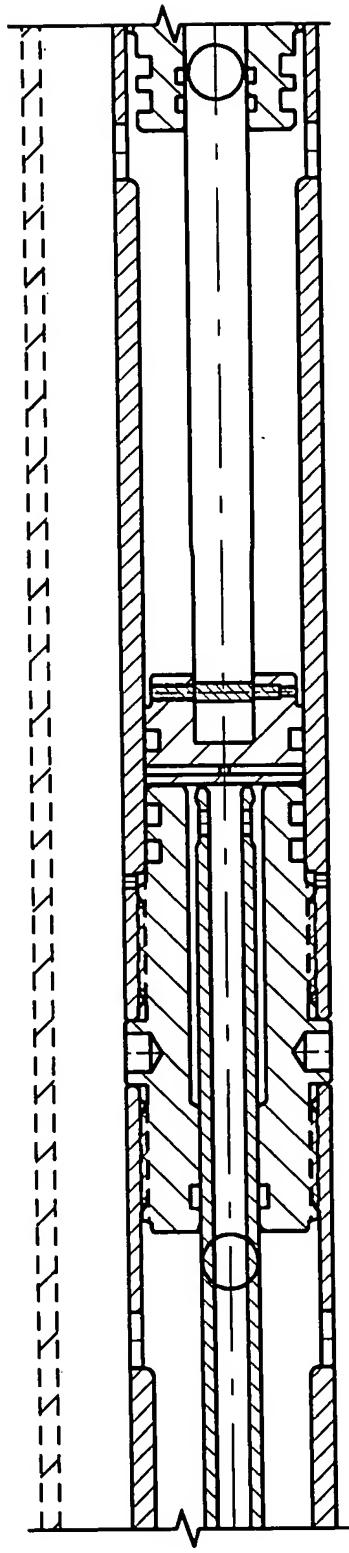
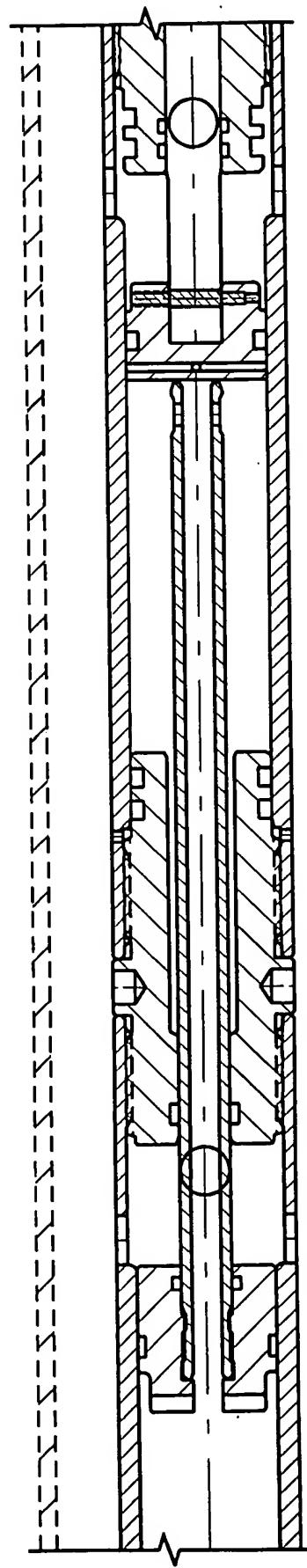


FIG. 13a



*FIG. 12b*



*FIG. 13b*

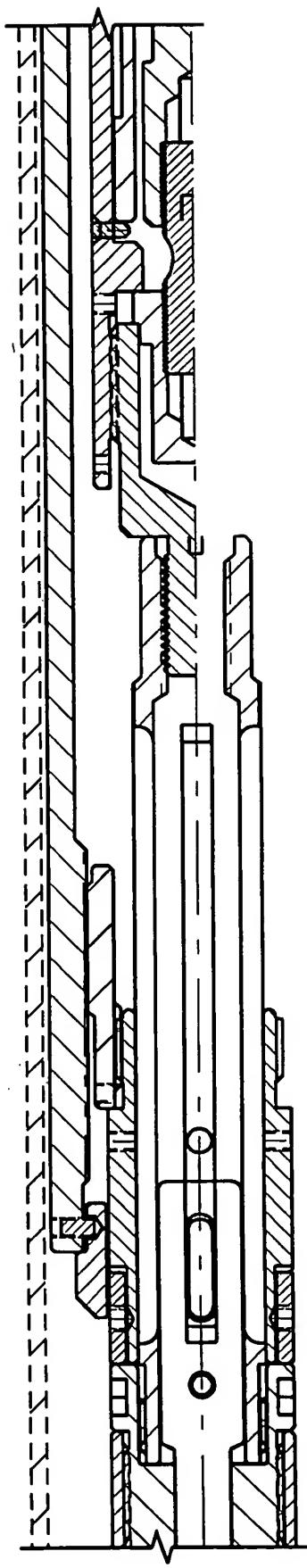


FIG. 12c

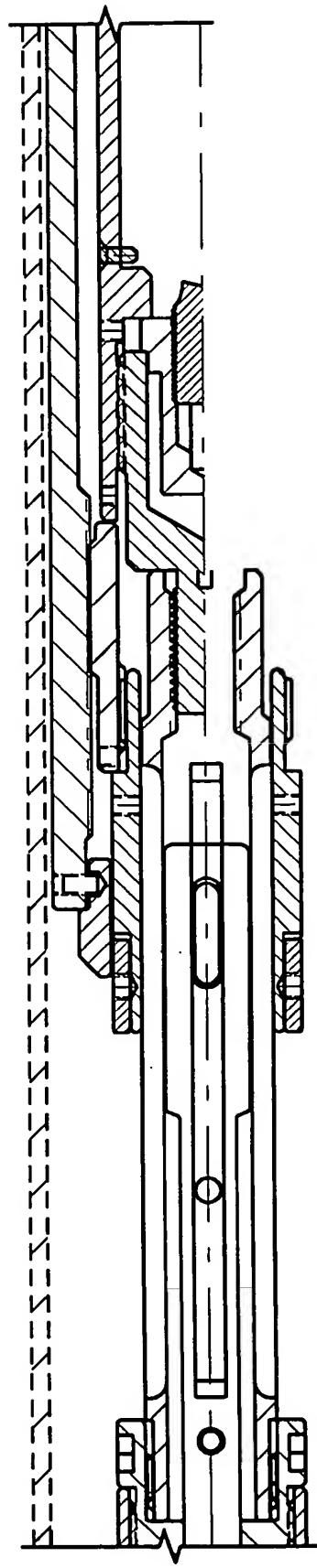
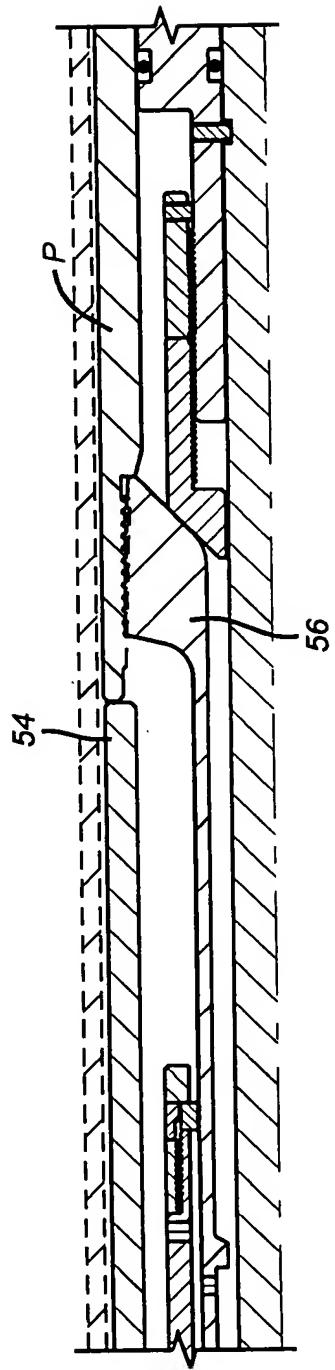
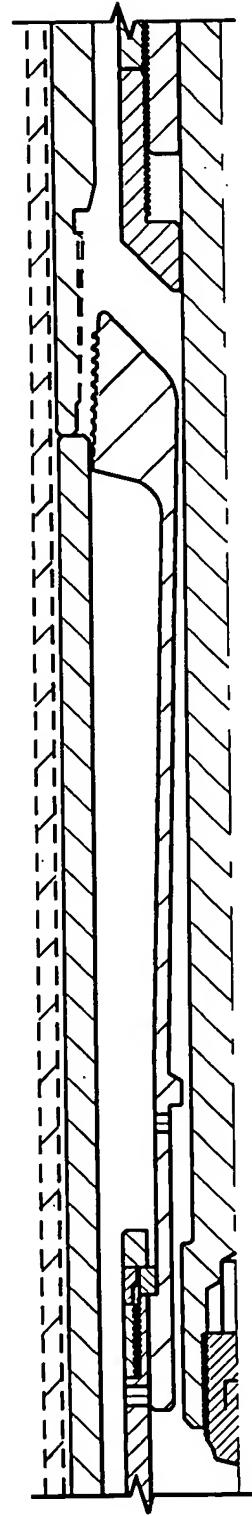


FIG. 13c



*FIG. 12d*



*FIG. 13d*

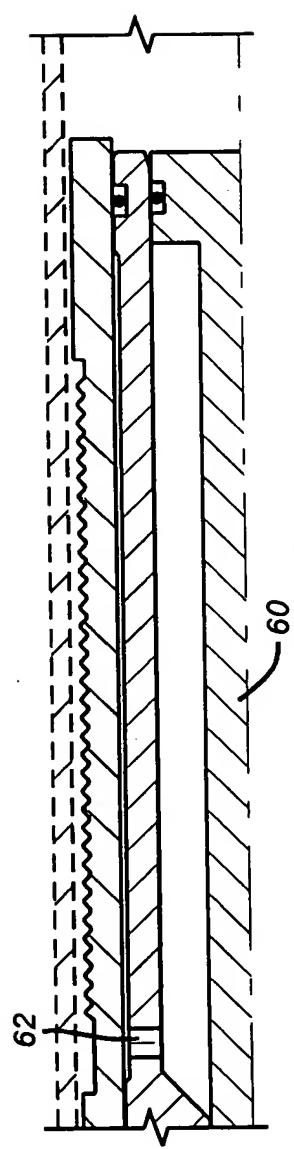


FIG. 12e

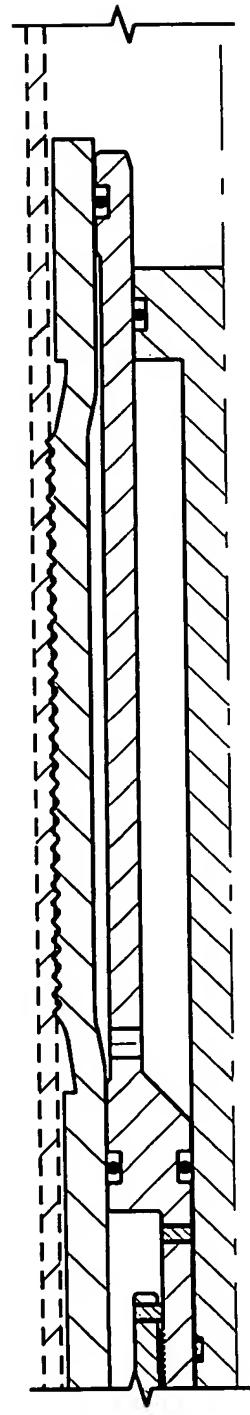


FIG. 13e

Figure 14

158 152  
180 Run-in Position

142 159

154 156 150 146 144

143 145

147 149

145 145

Set Position

170 149

172

174

176

178

180

182

184

186

188

190

192

194

196

198

200

202

204

206

208

210

212

114

116

118

120

122

124

126

128

130

132

134

136

138

140

142

144

146

148

150

152

154

156

158

160

162

164

166

168

170

172

174

176

178

180

182

184

186

188

190

192

194

196

198

200

202

204

206

208

210

212

214

216

218

220

222

224

226

228

230

232

234

236

238

240

242

244

246

248

250

252

254

256

258

260

262

264

266

268

270

272

274

276

278

280

282

284

286

288

290

292

294

296

298

300

302

304

306

308

310

312

314

316

318

320

322

324

326

328

330

332

334

336

338

340

342

344

346

348

350

352

354

356

358

360

362

364

366

368

370

372

374

376

378

380

382

384

386

388

390

392

394

396

398

400

402

404

406

408

410

412

414

416

418

420

422

424

426

428

430

432

434

436

438

440

442

444

446

448

450

452

454

456

458

460

462

464

466

468

470

472

474

476

478

480

482

484

486

488

490

492

494

496

498

500

502

504

506

508

510

512

514

516

518

520

522

524

526

528

530

532

534

536

538

540

542

544

546

548

550

552

554

556

558

560

562

564

566

568

570

572

574

576

578

580

582

584

586

588

590

592

594

596

598

600

602

604

606

608

610

612

614

616

618

620

622

624

626

628

630

632

634

636

638

640

642

644

646

648

650

652

654

656

658

660

662

664

666

668

670

672

674

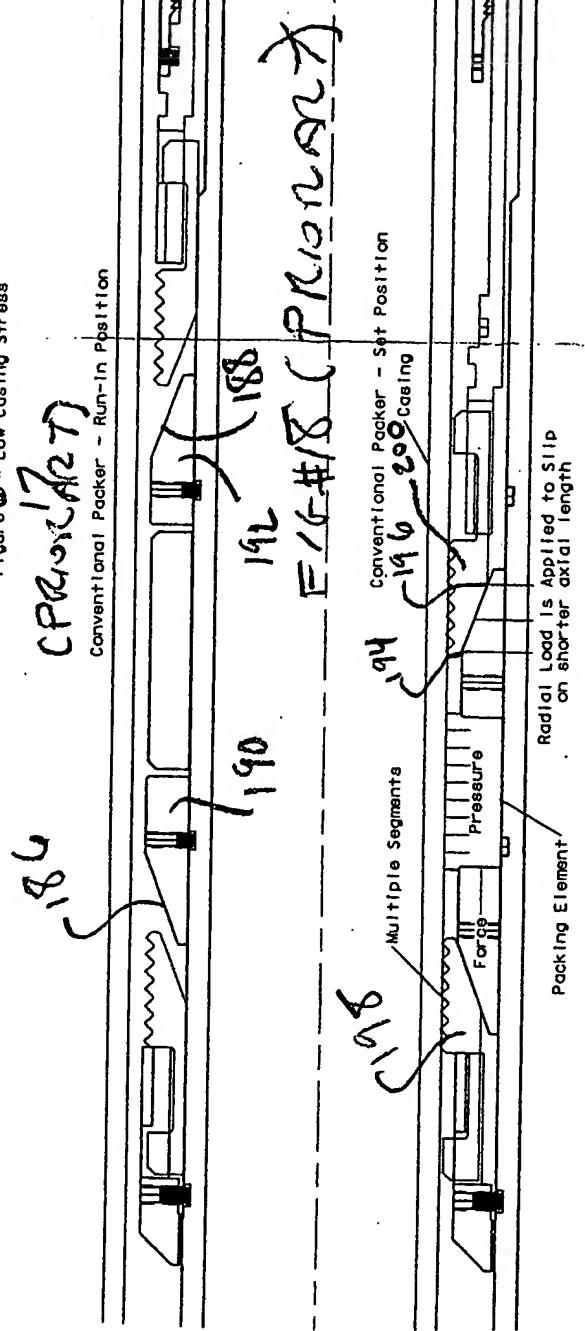
676

678

680

682

Figure 4 - Low Casing Stress



E16#18 (PRISONER)

Conventional Packer - Set Position

Multiple Segments  
Packing Element  
Force Element  
Pressure Vessel  
Radial Load is Applied to Slip on shorter axial length

E16#16

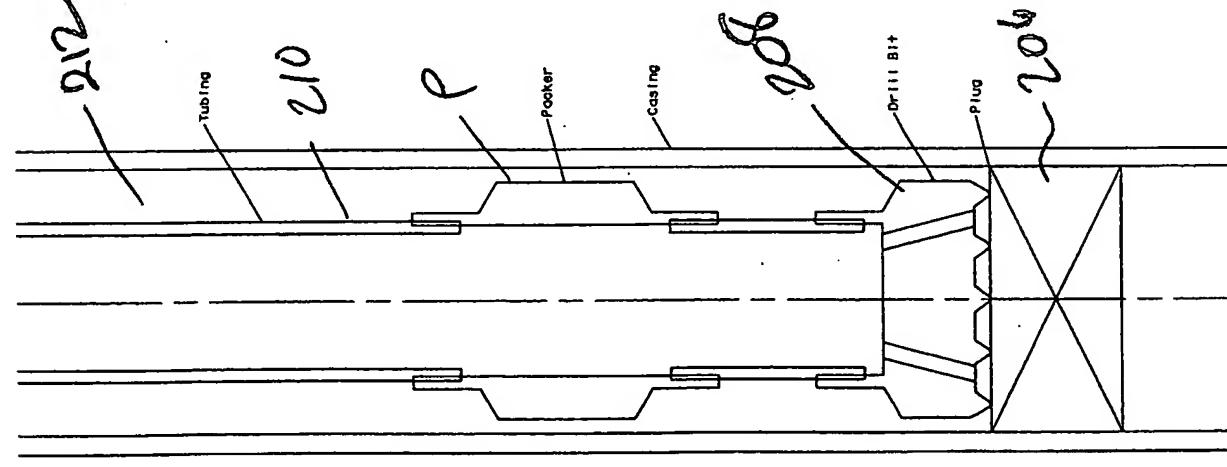
Figure 5 - Feed-thru Packer

E16#16

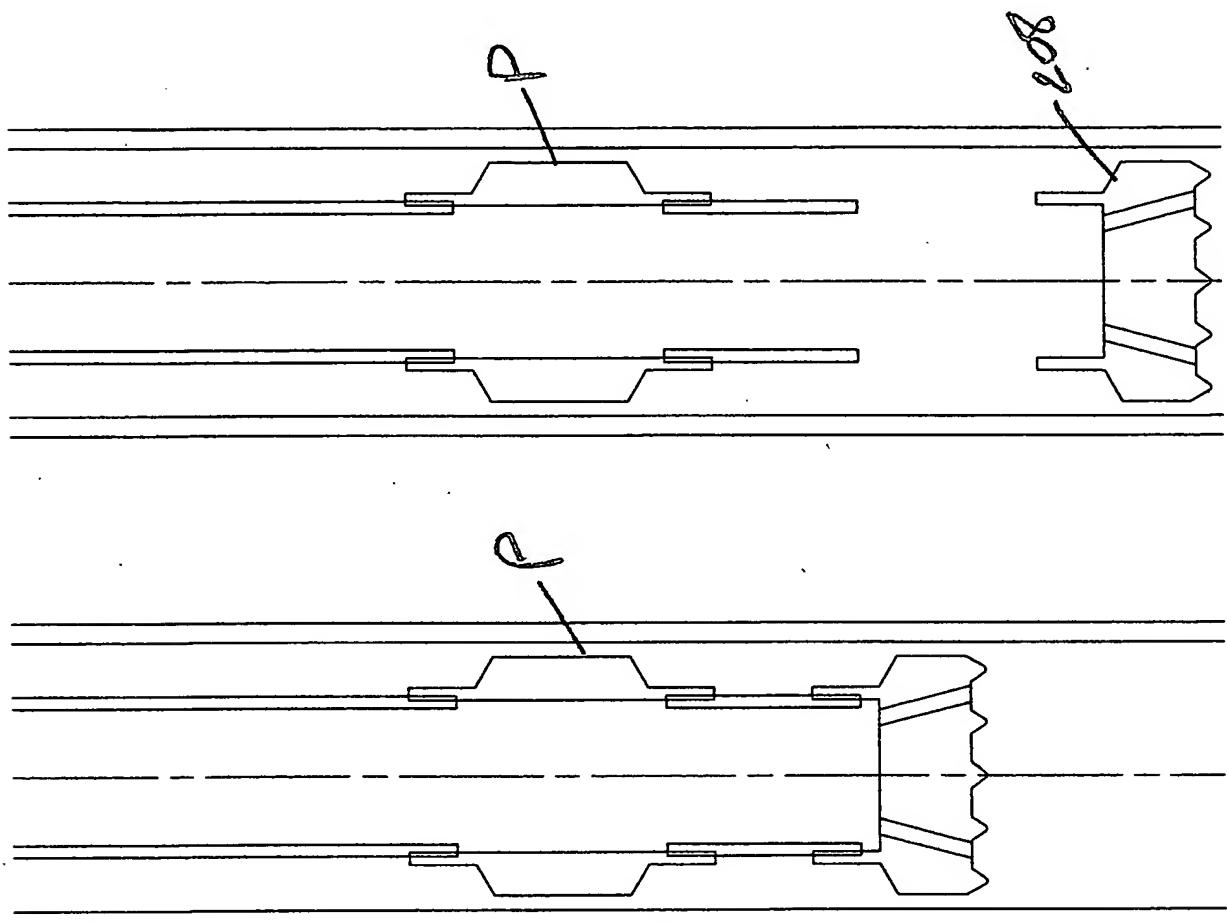
thru Line

F16#20

Drilling Plug Figure 7 F16#21  
Plugs Drilled out Shear-off Bit +



F16#21 Figure 7 F16#22



F16#23 Set Packer

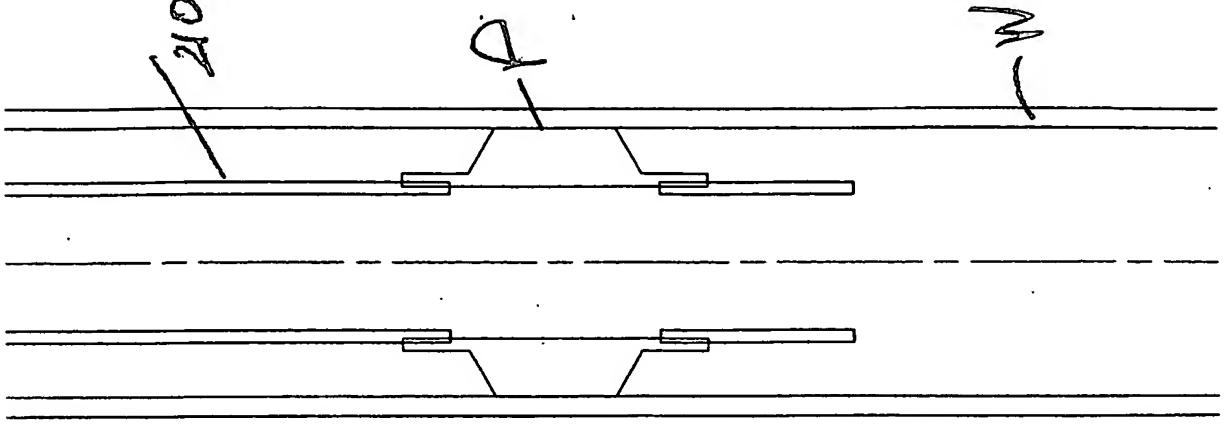


Figure 8  
Liner Hanger & Liner Top  
Isolation Packer

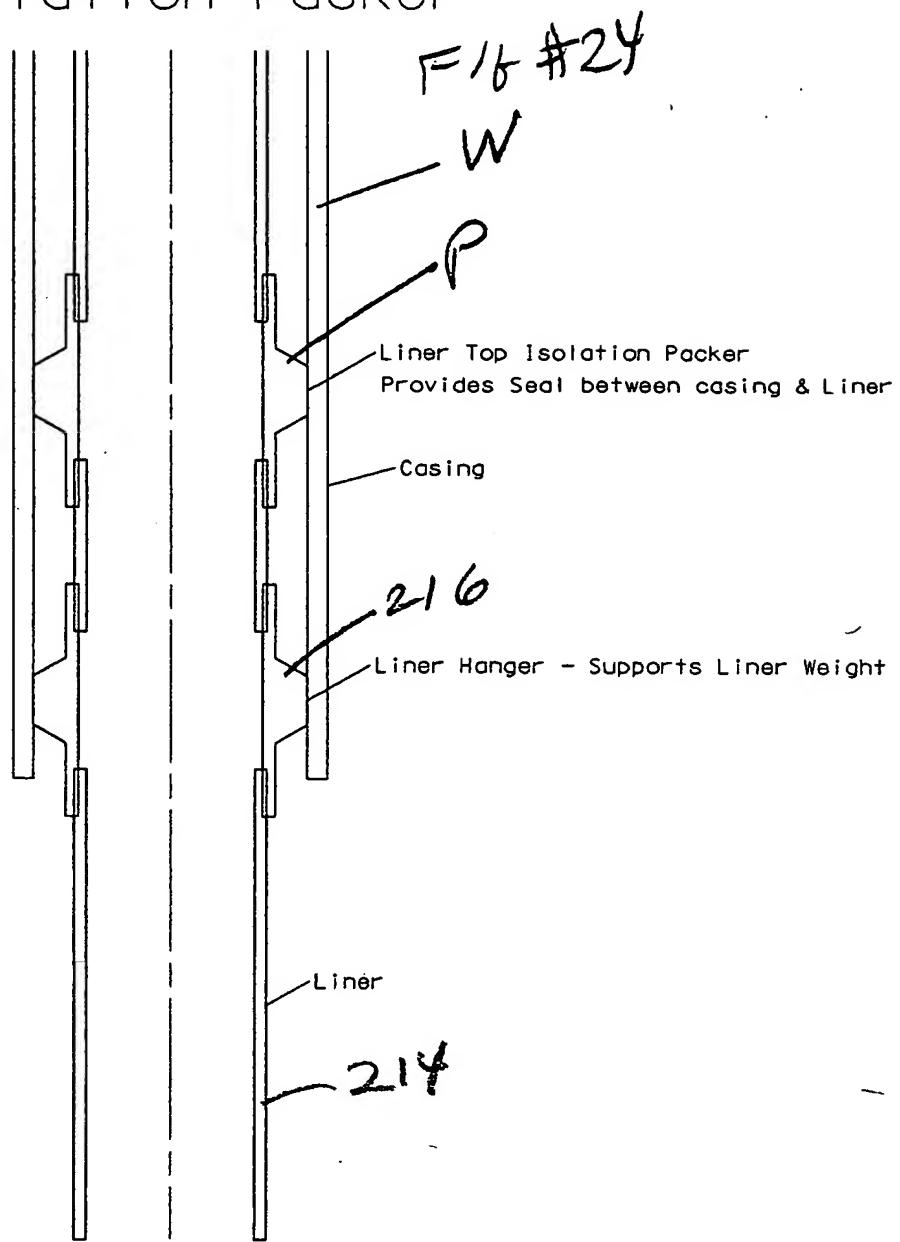


Figure 9

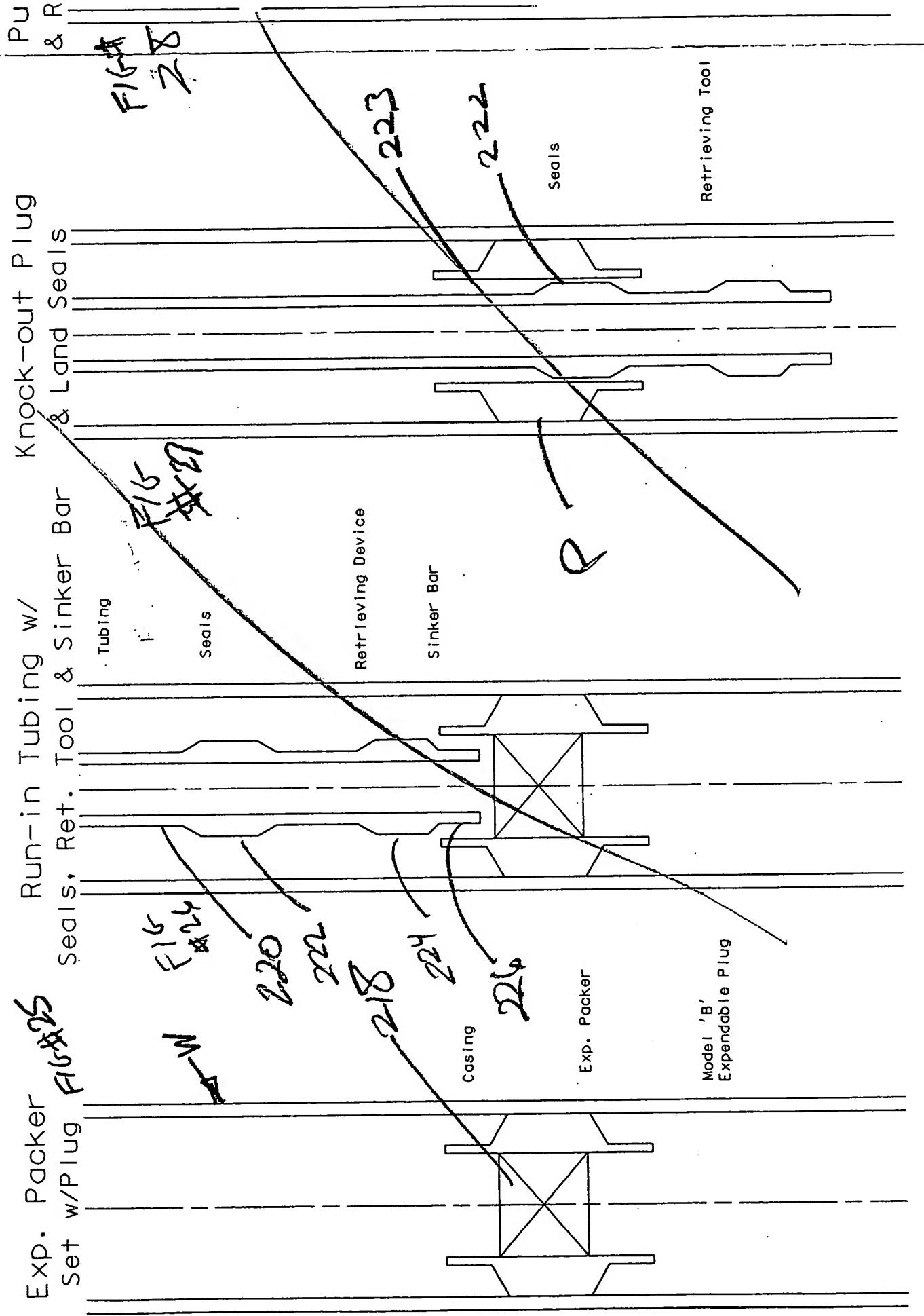
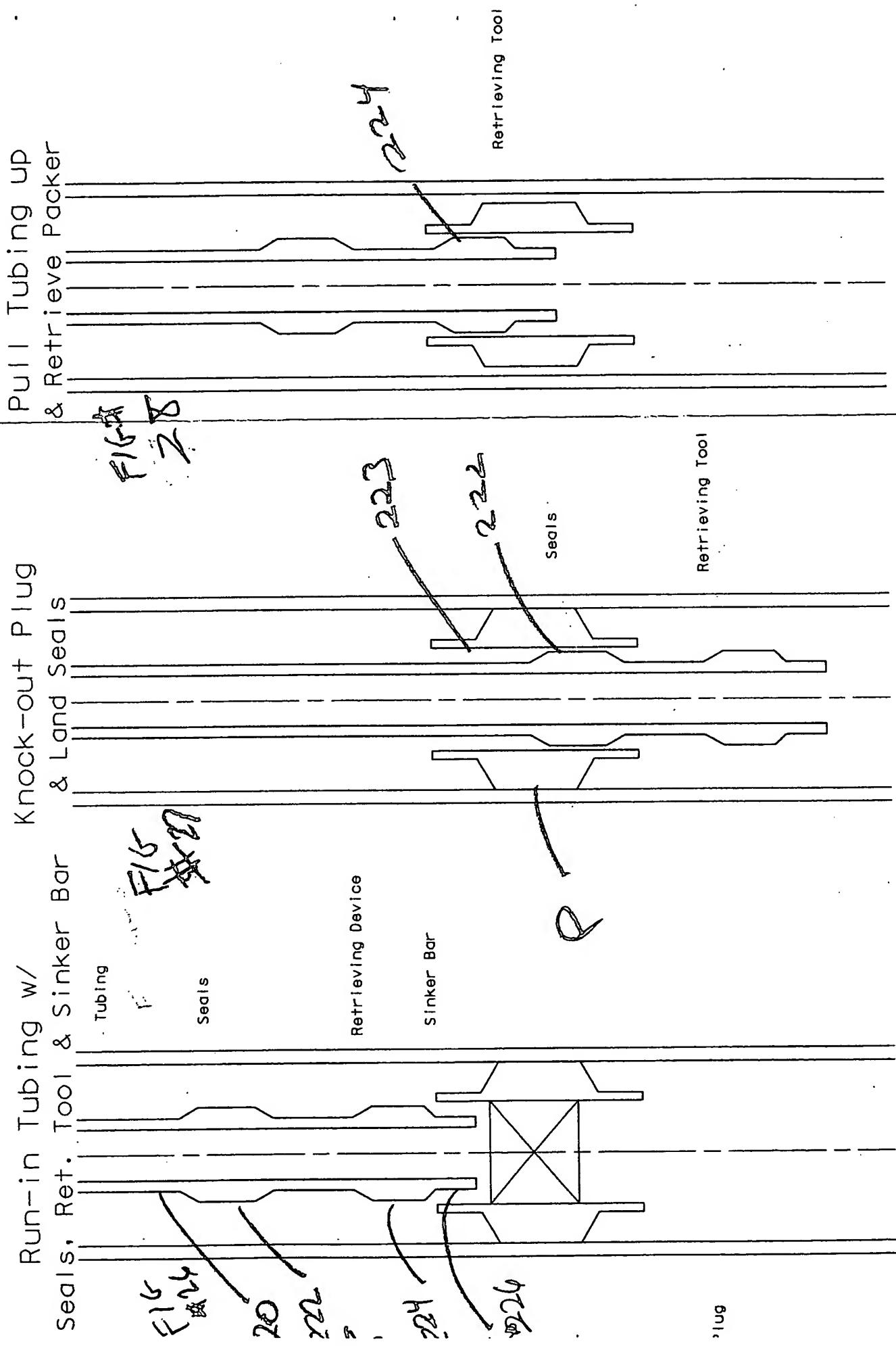
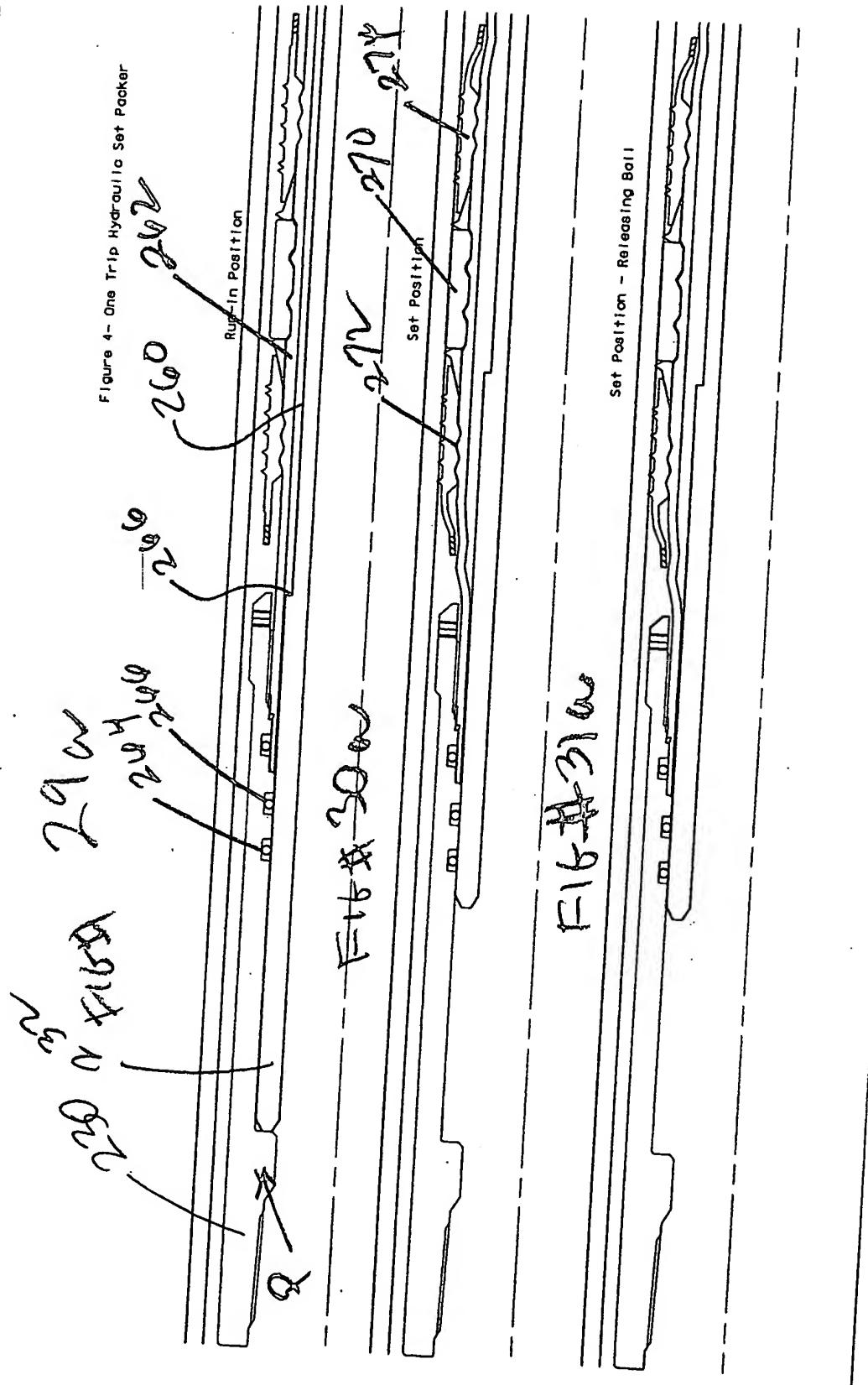


Figure 9



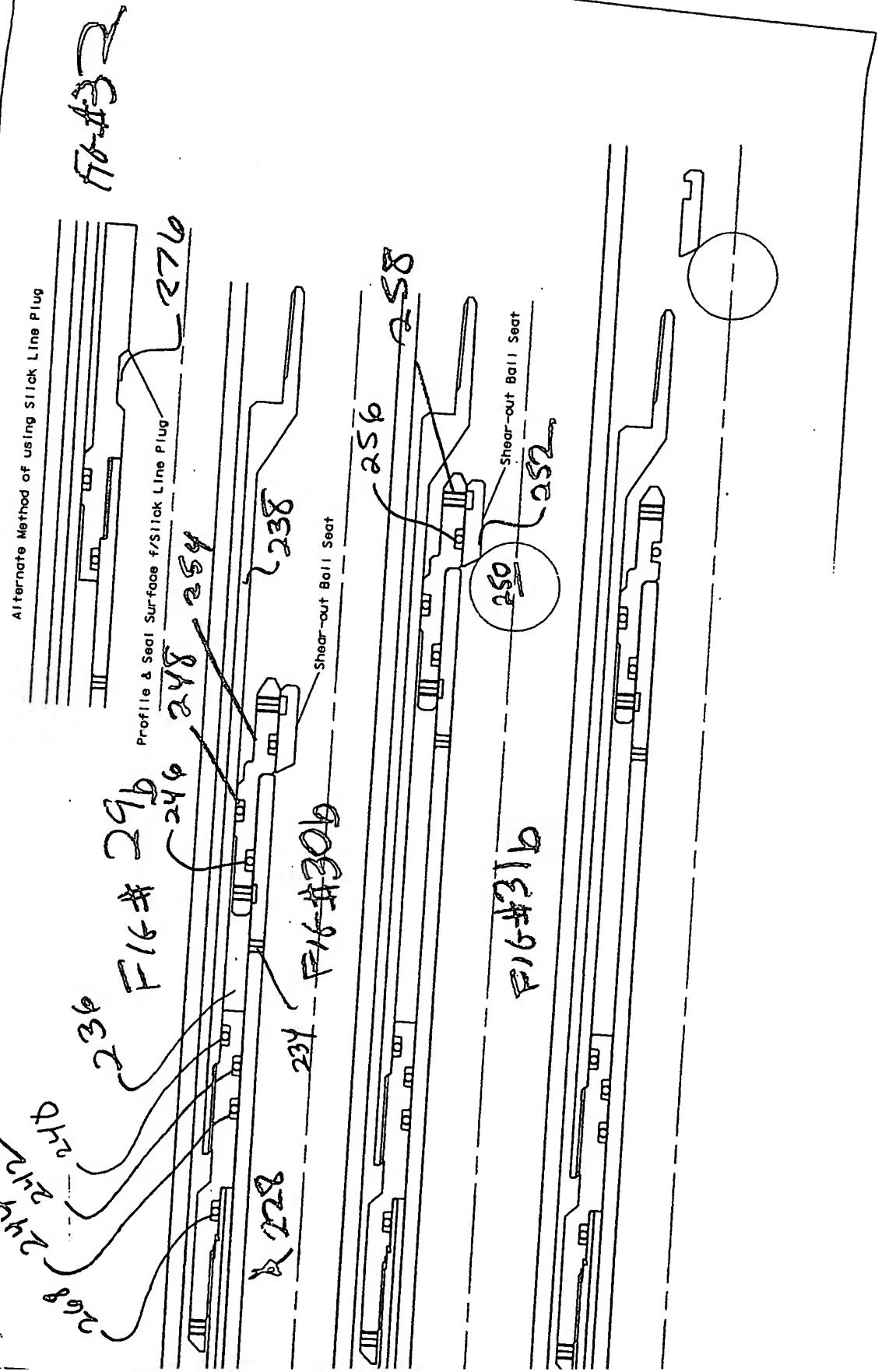


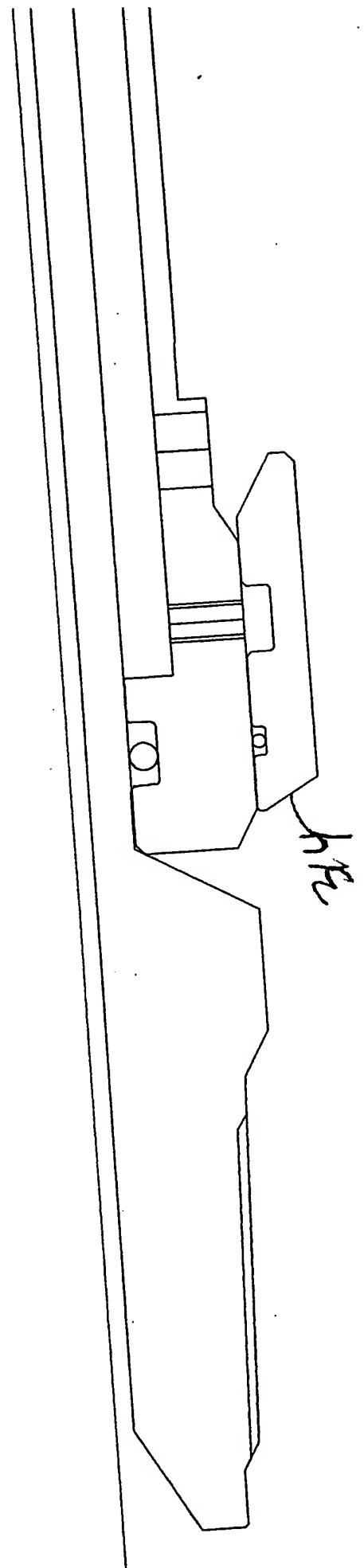
F16#112

228 230

Alternate Method of using Stick Line Plug

F16#112

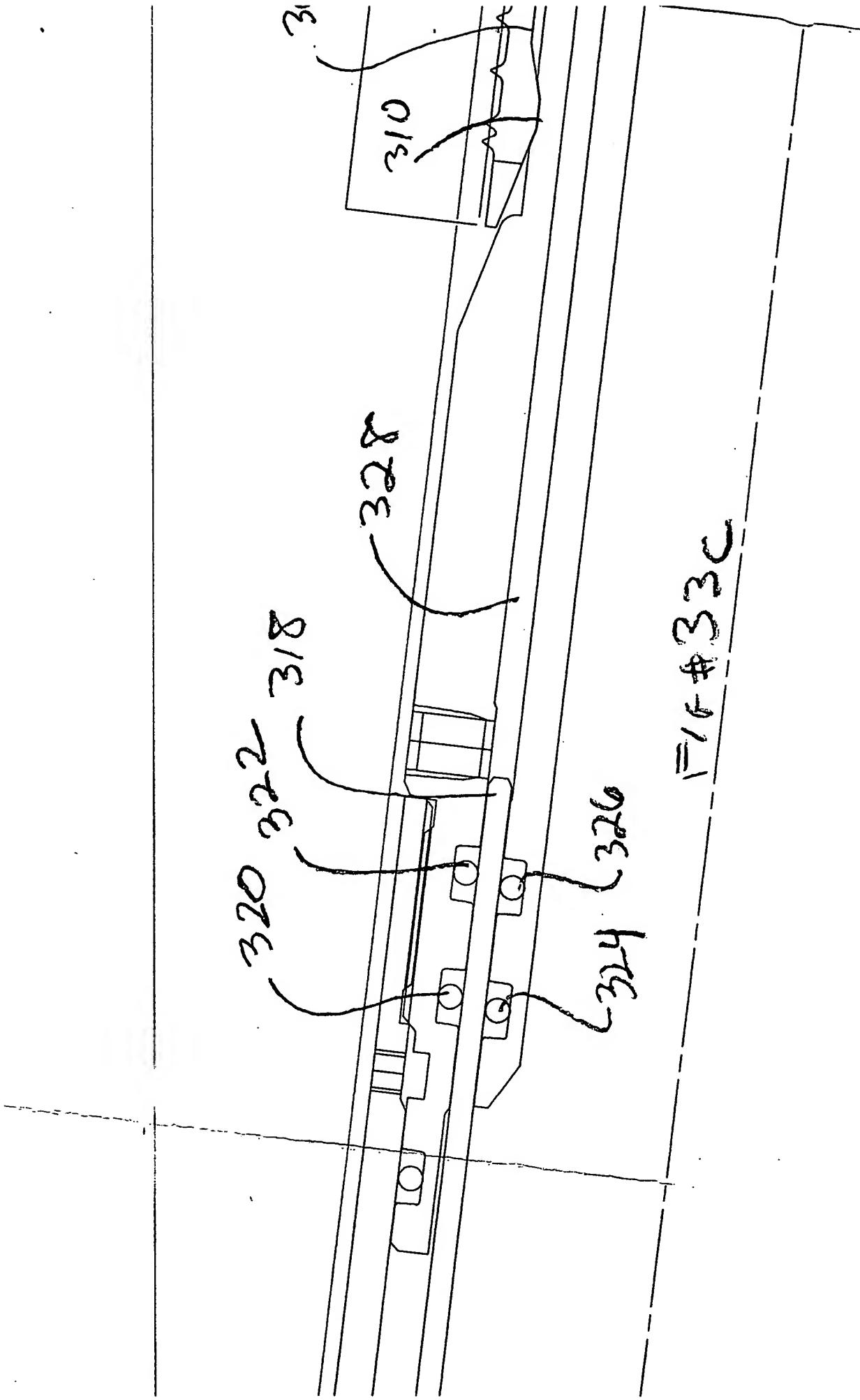


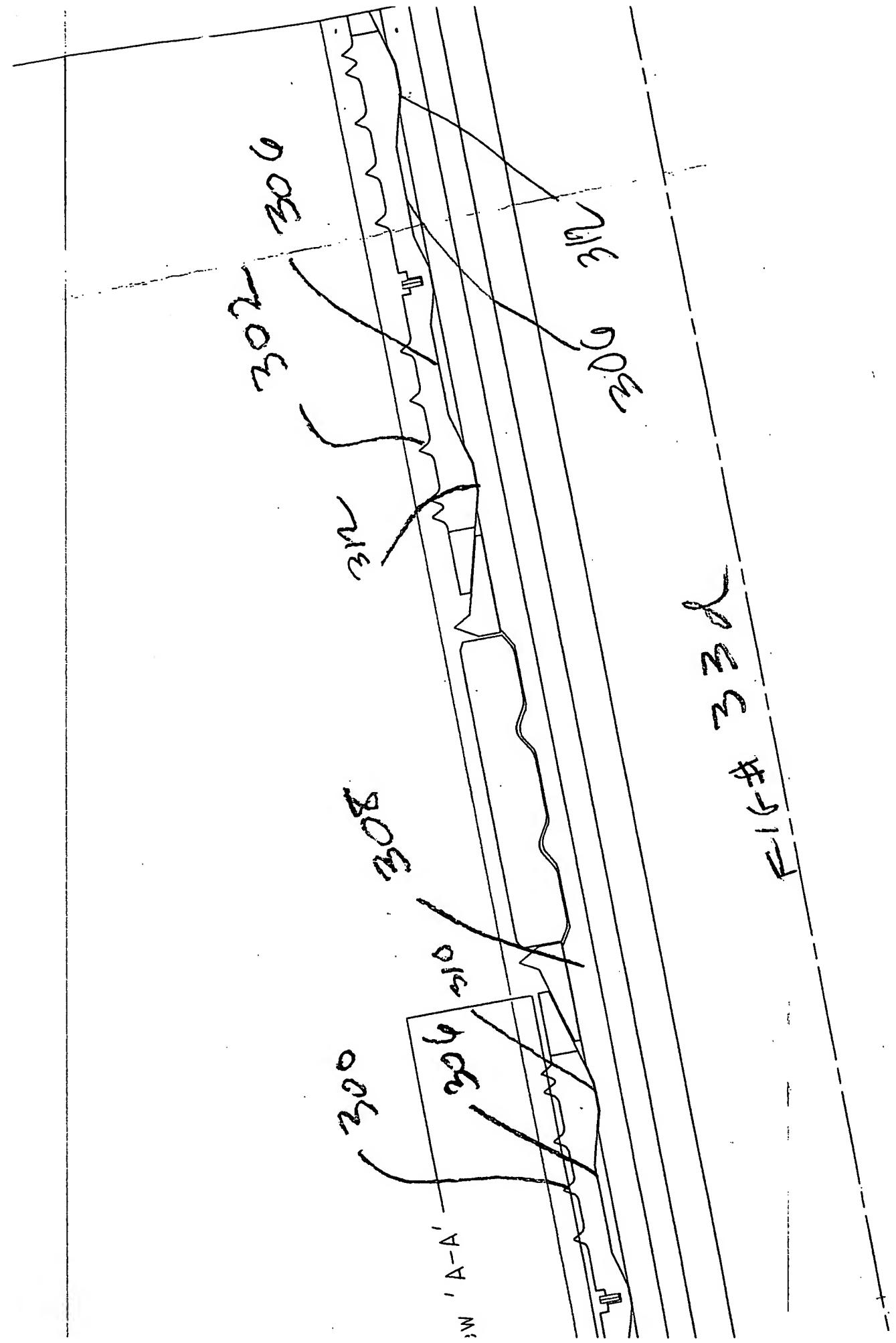


2168 334

Fig# 335

318





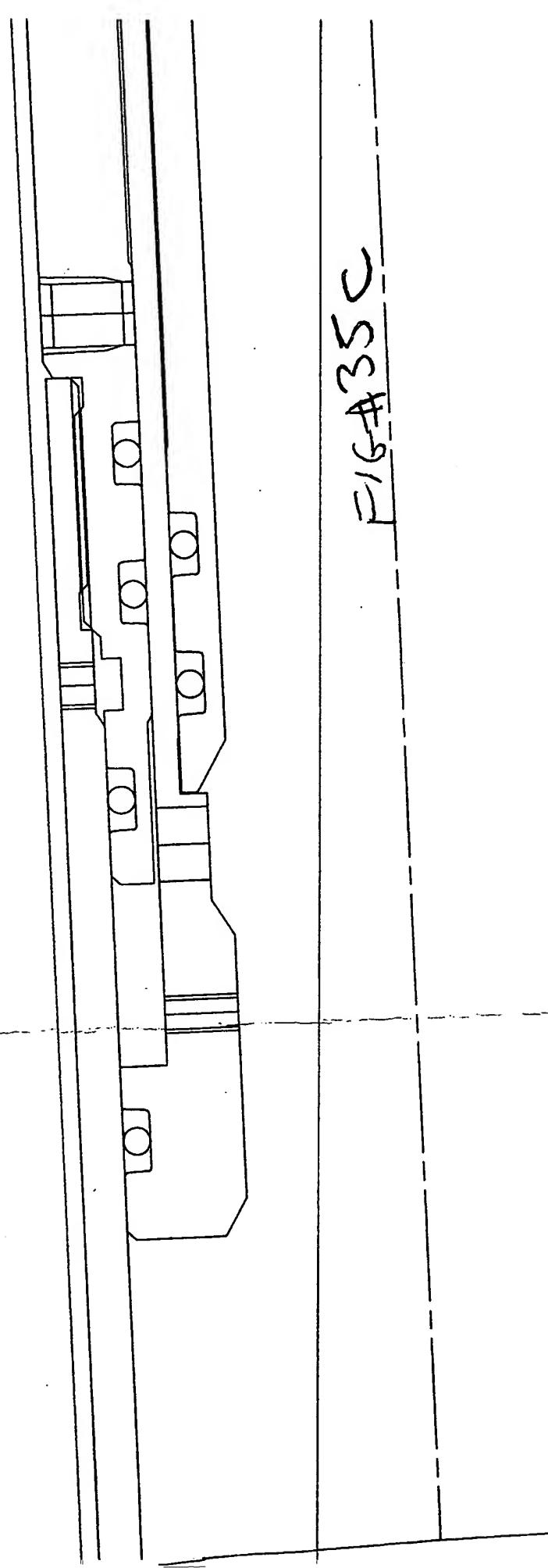
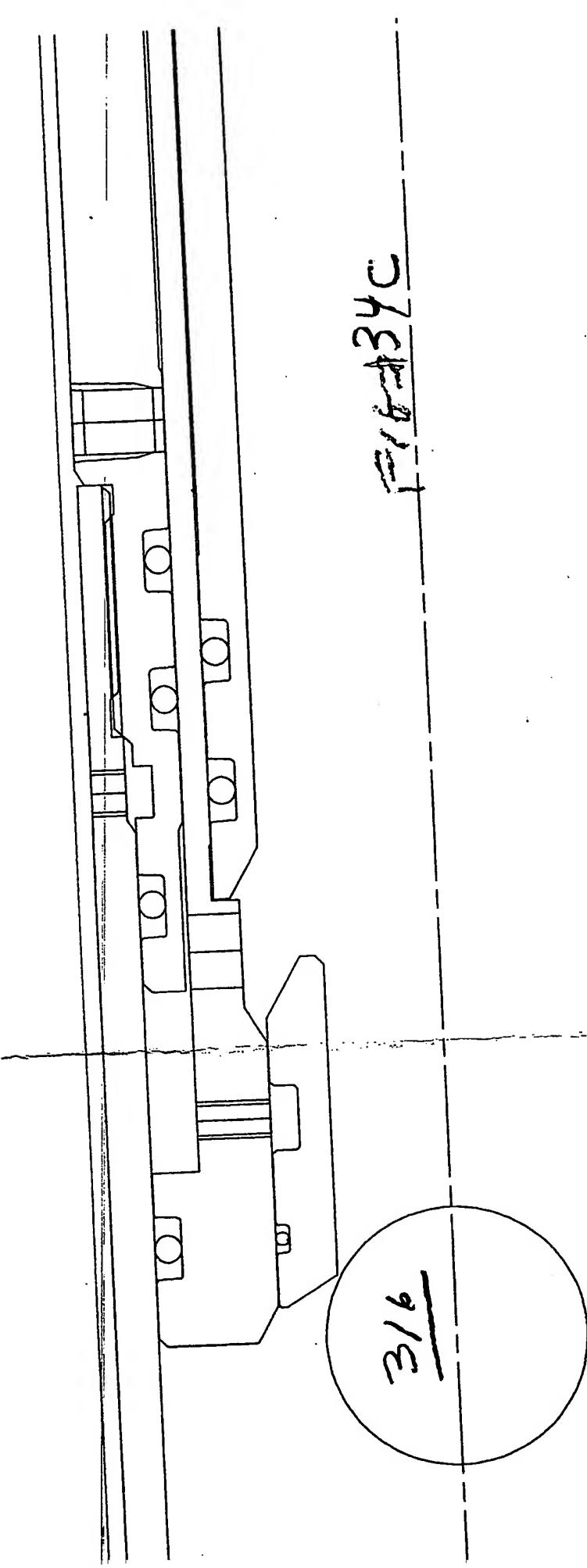
F1f-A33c

F16#34a

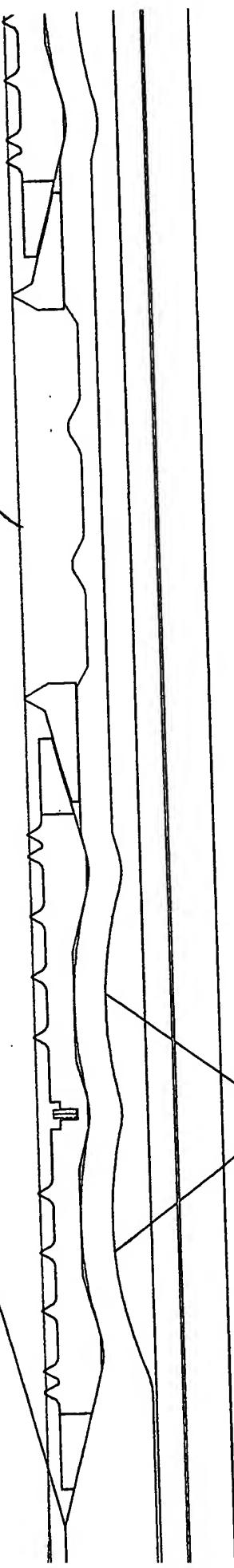
F16#35a

F16#346

F16#356

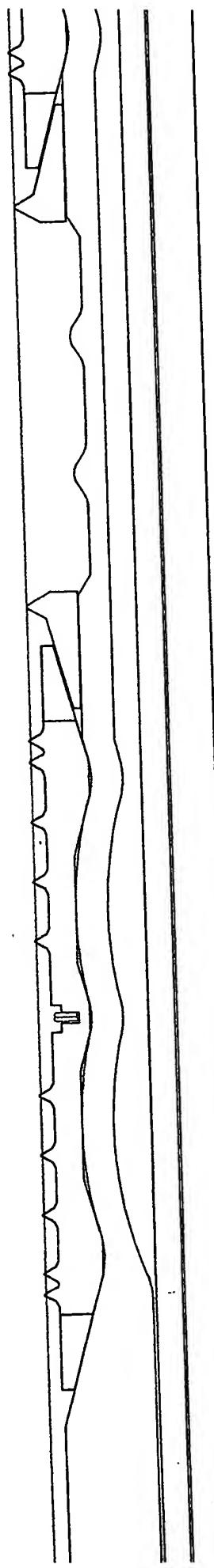


330



Expansion Mandrel forms in void in Slip Mandrel

~~1634d~~



1635d

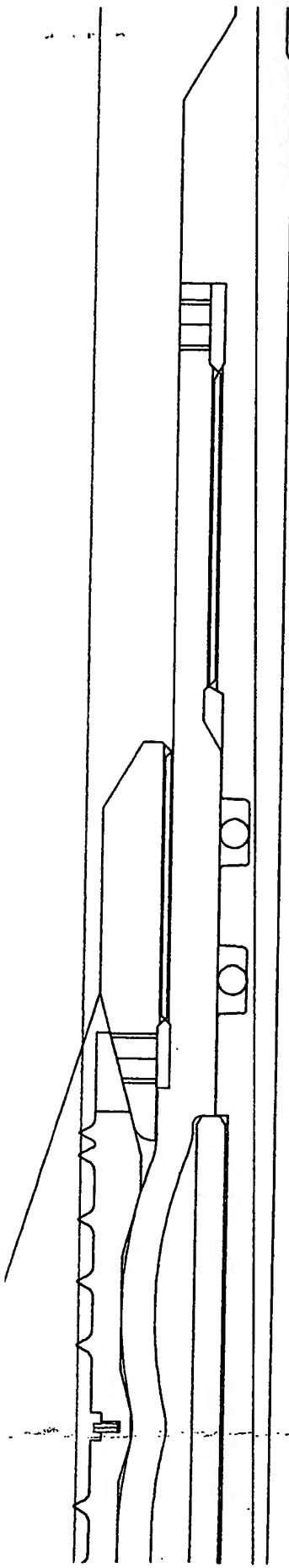


Fig 342

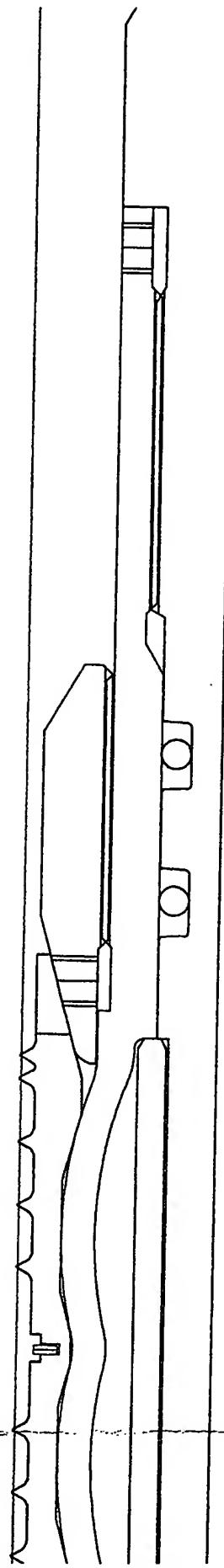
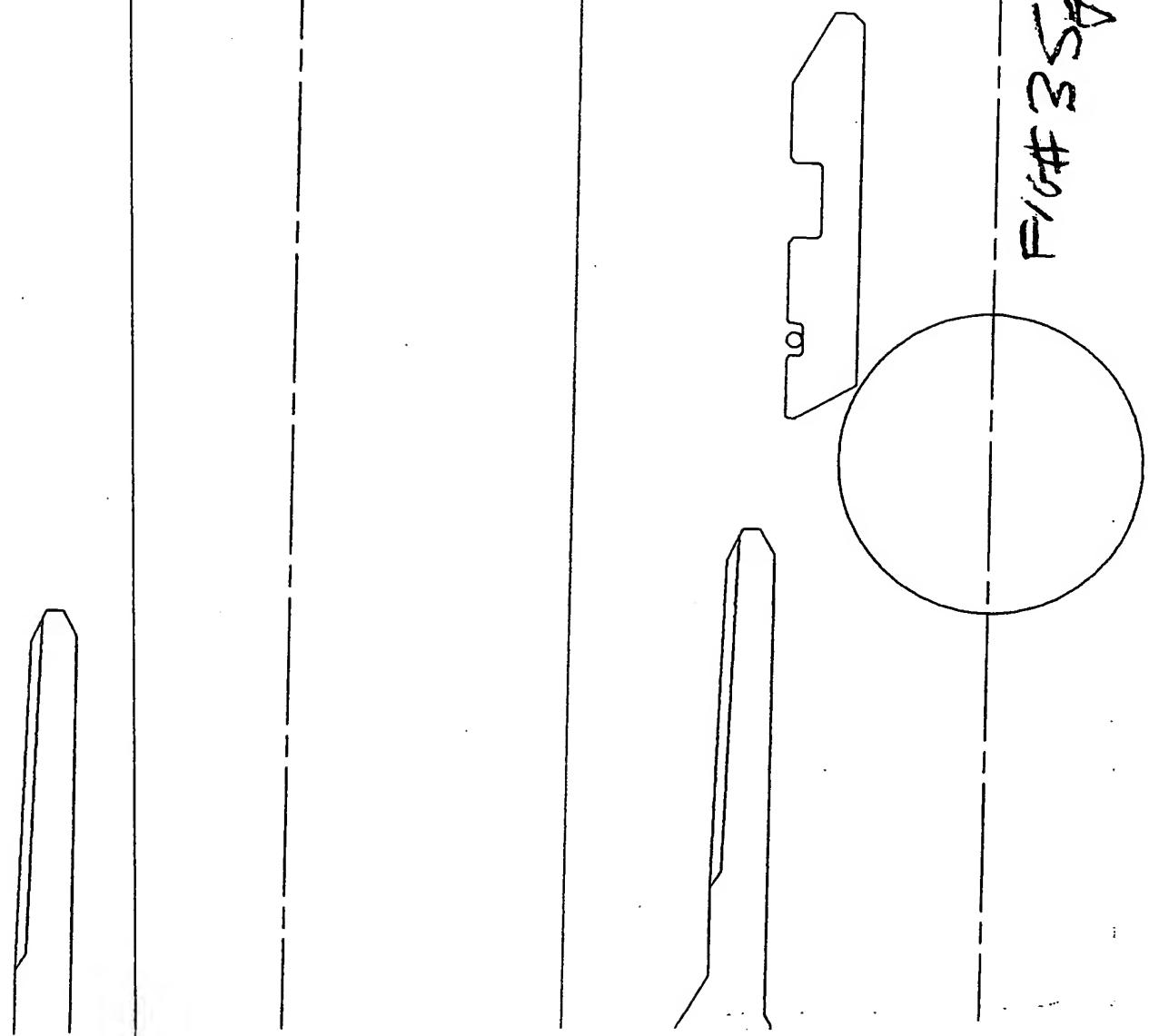


Fig 350



Fig# 35f